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ANESTHESIOLOGY IN THE HOSPITAL AND IN THE MEDICAL SCHOOL

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Two circumstances have been blamed for the delay or reluctance in accepting to the fullest the service which modern anesthesia might render. One is the lack of a sufficient number and quality of physicians prepared to accept the responsibility. The other, sometimes suggested as a cause for the first, is the existenc. of widespread abuses, exploitation and all round lack of appreciation of those who are devoting their energies to the specialty. The present would seem to be an auspicious time to reconsider the subject and to discuss how anesthesiology can best serve the needs of the medical student, the surgical profession, the hospital and, most important of all, our patients. During the war many surgeons for the first time observed the advantages of medical training as the foundation for an anesthetist. At the same time the number of physicians who realize the importance and attractiveness of anesthesiology as a major interest has been increased by several hundred per cent. We are now at a crossroad. Either we must take advantage of this new realization of the importance of anesthesia and of the interest and enthusiasm of returning "military anesthetists" or we shall continue the former abuses, neglect and exploitation of anesthesia and anesthetists. In the first instance patients will receive in the long future the best service in anesthesiology which current knowledge makes it possible to give them. In the second, that service will retrogress to a new low of neglect.

In order to establish a reasonable view of the problem we must disabuse ourselves of a generally held belief that the importance of anesthesiology lies in the "choice of agents" or in the particular "technic" employed. All drugs and the methods by which they are administered are subject to abuse. Through fundamental knowledge and diagnostic skill the abuses are avoided or neutralized, quite as much as by artful technical manipulations. The unimportance of the chosen drug is shown by the accompanying illustrations. An outline of experiments comparing some effects of vinyl ether, trichlorethylene and chloroform appears in table 1. It is evident that chloroform, an old but now almost discarded drug, does not come off second best when compared with two new agents which have been accepted with considerable enthusiasm. A statistical evaluation of results following the administration of common agents at Wisconsin General Hospital is presented in tables 2 and 3, the former showing the incidence of major pulmonary complications and the latter of "hospital" deaths occurring in the daily work of the institution. It will be noted that the variation in results is not wide following the use of the several agents. If time for discussion permitted, it could be shown that such variations as do exist are better explained by the preoperative condition of patients, the nature of operations and the lack of training and the inexperience of anesthetists rather than by correlation with the drug chosen or the method of its administration. For instance, both death rate and pulmonary morbidity were high among patients credited to nitrous oxide and "other" inhalation agents. However, nitrous oxide, combined with high percentages of oxygen, was often used in cases in which the physical condition was desperate or the need for oxygen administration acute. Likewise the addition of "other" agents was often in the presence of incurable disease in order to study the effects of drugs with which we were less familiar.

It's not the tools but the way the tools are used. The future of anesthesiology, as I see it, is not dependent on the discovery of new drugs but may be boiled down to two efforts: (1) elimination of certain abuses which are common and accepted practices in our country and (2) the establishment of an understanding by schools, the profession and the public of what anesthesiology really implies in the hospital and in the medical school.

ABUSES

To enter into a detailed and comprehensive discussion of the abuses of anesthesia, of the anesthetist and by the anesthetist is not the present purpose. Doubtless a complete survey of the whole country ought to be made in order to call to our attention the various and sundry sins of omission and commission which we are permitting to continue, largely without realizing their harmful effects on the service which our patients receive. A brief enumeration of a few of these abuses will illustrate what is meant. The following quotations extracted from resolutions adopted by the Board of Trustees of the American Medical Association, after they had been accepted by the American Hospital Association and other national bodies, state the ideals of organized medicine:[1]

> A qualified medical specialist in anesthesia is entitled to recognition as a professional member of the medical staff and as head of a hospital department. . . .
>
> Neither the hospital nor the anesthetist should exploit the patient or each other.

and yet widespread disregard of these precepts is common. A well organized and adequately staffed department of anesthesia is the exception rather than the rule in our hospitals. The administration of such departments as do exist is too often dominated by hospital executives or others whose vision of the ideal is blurred by a desire to avoid entries on the debit side of the

1. Anesthesia Service in Hospitals, J. A. M. A. **114**: 1260 (March 30) 1940.

ledger. The employer of a physician well trained in anesthesiology, on a restricted salary and with an inadequate number and quality of assistants, exploits that physician. If the employer collects as anesthetic fees from patients more than is spent to provide service in anesthesia, the public is exploited. No less blameworthy is the physician who, although a competent anesthesiologist, hires inexperienced, untrained physicians or technicians at inadequate salaries so that he may appear to serve more private patients—and collect more fees.

TABLE 1.—*Effects of Anesthetic Agents on Dogs* *

	Hepatic	Renal	Cardiac
Divinyl ether (vinethene)	Central zonal necrosis to acute yellow atrophy	Definite impairment; urea clearances 10%; to anuria	None
Trichlorethylene (trilene)	Minimal hydropic to fatty degeneration	No definite impairment	Severe (ventricular tachycardia)
Chloroform	None to minimal hydropic degeneration	No alteration of function	Moderate (ventricular tachycardia rare)

* The three agents were administered to dogs by the carbon dioxide absorption to and fro technic, particular attention being paid to adequate oxygen tension in the respired atmosphere and to adequate ventilation of the lungs. Administrations, one hour in duration once a week, were repeated to produce structural as well as functional hepatic and renal damage if possible. The general picture rather favors chloroform in the comparison.

The patient's "fear of an anesthetic" is proverbial. Perhaps the contempt bred of familiarity which dominates the attitude of those of us who work in operating rooms is more illogical than the patient's fear. The needs of many modern surgical operations demand that the patient be carried much nearer to a fatal dose of drugs than does any other branch of therapeutics. Cases are not rare when diagnostic acumen and swift change in the plan of management are matters of "life and death." But care of the patient during operation is only one of many services to patients, surgeons and hospitals which may be considered a part of anesthesiology. The public wants the best service obtainable and for that it has always been willing to pay. If present abuses and injustices can be eliminated, even now patients pay enough to secure much pleasanter and safer service than they are getting. The best would be willingly purchased. What we need for the future is to determine how best to organize the service of anesthesiology in the hospital and in the medical school.

COSTS

In line with practice common in the other surgical specialties, the professional anesthetist has, in the long past, collected his income directly from his patients. Since the fees of the surgeon were very large in comparison with those of the anesthetist, the latter found it necessary to administer many more anesthetics than the surgeon had to perform operations in order to acquire a satisfactory income. Under these circumstances every minute of his working hours has to be arranged very carefully if his many small fees are to equal one or two of those received by the surgeon. The burden of "free" cases and extremely long operations may fall with considerable injustice on the anesthesiologist. With increasing duties outside the operating room which the practice of anesthesiology now implies, various plans are being tried for equitable distribution of the funds collected. Full time and part time salaries, percentages based on the work done and skill required, or these combined with private fees are some of the methods in use. Probably no one plan will be found best for all institutions. The important thing is to avoid "exploitation," to be sure that sufficient funds are set aside or collected to pay adequately for good service in anesthesiology and then to guarantee that such funds be used to provide such service and for no other purpose.

ORGANIZATION

The accompanying diagram is an outline of service in anesthesiology which may be split apart to apply to various types of institutions. The word "salaries" in the figure had better be read "remuneration" since, where private cases predominate, the fees collected directly may constitute the whole or a part of the source of income. In any case the organization of a real "department of anesthesiology" is desirable in order to provide unity of effort and efficient twenty-four hour service in whatever meaning the word is taken to imply in a given hospital. Whether intravenous therapy, inhalation therapy, block anesthesia for diagnosis and therapeutic purposes, the care of acute pulmonary difficulties or other services are included is a matter for decision by each hospital staff. Responsibilities will be assumed as individual skills and interests develop.

The diagram includes both hospital and medical school relations because organizations in a majority of our medical schools are as yet in the gestation period. Certain mistakes have been made in starting new departments. The most common, in hospitals as well as in the university hospital-medical school setup, is the misconception that a single experienced and capable individual can constitute a department of anesthesiology and can care for the multifarious duties in even a small hospital. The diagram at the upper left emphasizes the fact that service, even in the operating room, requires at least one competent supervisor for each three operating teams if safe practice is to be maintained.

TABLE 2.—*Major Respiratory Complications* *

Agent	Number of Cases	Incidence	
		Cases	Per Cent
Cyclopropane	10,607	229	2.16
Ether	5,203	143	2.74
Nitrous oxide	2,114	76	3.59
Other inhalation	624	31	4.96
Intravenous barbiturate	1,398	16	1.14
Regional agents	3,017	79	2.61
Others	263	4	1.52
Total	23,226	621	2.67

* This table indicates that the percentage of major respiratory complications does not vary widely. The physical state of the patients receiving nitrous oxide and "other agents" is believed to explain the higher percentage with these agents rather than effects of the drugs.

In institutions where the geographic spread of operating rooms is wide or where the incidence of serious operations is great, maximum safety may demand an experienced and competent anesthetist for each operating team. A single person may of necessity be asked to initiate the organization of a department. However, unless sufficiently competent associates can be added shortly, the individual's health will suffer and the service will fail. One individual cannot be in several places at one time. A "department" implies sufficient

personnel, not a single individual trying to teach a large group of neophytes or to supervise a similar number of technicians.

TEACHING

Modern hospitals are medical teaching centers, good or bad, whether they wish it or not. If we in medical schools who have contact with undergraduate medical students did our full duty, interns and residents would come to the hospital well founded in the basic knowledge necessary for clinical teaching of anesthesiology. Since we still fall short of that goal, a brief intensive course to cover the basic need is contemplated in some schools, as is indicated at the lower right of the diagram. Such courses, given in medical schools, may be combined with residencies in hospitals where clinical material, clinical teaching and capable supervision are available but a faculty-team in a medical school is not possible. Experience has taught that, however excellent the instruction in anatomy, physiology, pharmacology and biochemistry in the regular curriculum, these matters need to be reconsidered and emphasized in the light of clinical experience in anesthesiology. Results of such short graduate courses for medical officers during the war support the belief that they may prove very valuable if suitable curriculum and teachers can be arranged.

Table 3.—*Deaths in the Operative and Postoperative Periods* *

Agent	Number of Cases	Deaths	
		Cases	Per Cent
Cyclopropane	10,007	225	2.12
Ether	5,203	123	2.36
Nitrous oxide	2,114	102	4.8
Other inhalation	624	27	4.33
Intravenous barbiturate	1,398	24	1.7
Regional agents	3,017	108	3.57
Others	263	12	4.56
Total	23,226	621	2.67

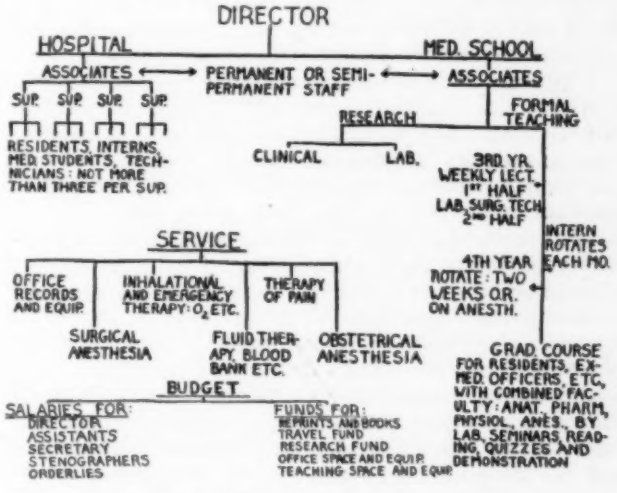
* Comparable to table 2, the higher death rate following nitrous oxide and "other agents" is believed to be due to the preoperative condition of the patients.

No less important than graduate teaching is that to which the medical student is exposed. Both must be conducted from the point of view of the hospital, not the laboratory. The sixteen lecture-demonstration-discussion periods shown in the diagram as required of third year students prove to be a minimum of time in which to reinterpret and apply the undergraduate's previous knowledge of basic science to the problems which he must solve in the hospital. On graduation he ought to have sufficient knowledge of anesthesia to distinguish the good from the bad, and in addition every physician must have a clear concept of the physical as well as the physiologic factors of the respiratory and circulatory systems. Since care of sudden changes in these factors is the hourly concern of the anesthesiologist, he has been considered the teacher most likely to equip the medical student to deal with the emergencies he will later encounter. All this, in my estimation, is essential to the education of a medical practitioner whatever his plans for the future may be.

Research is often looked on as the chief end to be attained by a director or a department. To my mind it ranks third in the objects sought. Service to patients, teaching and lastly research is the order of importance as I see it. In the diagram, research is under the medical school. However, just as with teaching, I believe that research should be a cooperative effort between the faculty of medicine and the hospital staff. If new drugs are to be investigated or old ones studied, the laboratory first, then the operating room should be the order of attack. It is important for the anesthesiologist to be familiar with laboratory customs, language and literature. It is no less important for certain workers in the laboratory to become familiar with the problems of the operating room and the ward. Much wasted effort in unnecessary experimentation can be avoided by interdepartmental friendship and understanding throughout the medical school and hospital.

RELATIONS WITH THE SURGICAL DEPARTMENT

The primary duty of anesthesiology is service in the operating room to the surgeon and to his patients. At the same time every department of the hospital can benefit by the help of the anesthesiologist on certain occasions. Should the department be a subdivision of the department of surgery or should it be a separate entity? In the diagram it is shown in the latter relation because experience has demonstrated that this is the more satisfactory to all concerned. Such independence, however, implies an exceptionally sympathetic attitude toward surgery. Those who take part in a surgical operation should form a "team" in the best sense of the word. The attitude of the anesthesiologist in that team must be one of the utmost cooperation—cooperation even to the point of subservience when subservience is necessary for the best accomplishment of the team. But never subservience beyond that point. The anesthesiologist is the colleague of the surgeon. The patient is best served by their mutual friendship and joint discussion of the problems involved in his care. Young anesthetists and surgeons must be warned against acquiring a critical attitude toward each other.



Composite diagram of departmental organization. The scope of the effort and the size of the institution will determine the number of individuals needed. Under "Budget," salaries should be understood to mean "remuneration," since private fees may constitute all or a part of the financial support.

There is ample opportunity for the display of the talents of the anesthetist in anesthesiology and of the surgeon in surgery. The attitude of each toward the other can benefit by previous experience in the general practice of medicine. The precepts exemplified in the golden rule should govern their personal relations. In too many of our hospitals anesthesiology suffers because

of domination by the department of surgery or by the administrative office of the hospital. Patients will receive the best service in a hospital where the personnel deserves and receives the respect of the whole institution.

TECHNICAL ASSISTANTS IN ANESTHESIOLOGY

Habit determines the routine of our daily lives. Once we are accustomed to doing a thing in a certain way, that becomes and remains the right way unless we devote some real thought to the matter in reconsideration. Some assistance for the woman in labor was found necessary in very early times. Women and the medical profession accepted the midwife as the usual assistant at parturition. The physician was called in only after the customary practice had failed. It was but little over a century ago that Dr. Gregory was fined a hundred pounds sterling in the courts of Edinburgh, Scotland, because of a public caning which he had administered to Dr. Hamilton. Gregory was then professor of physic, or what we call internal medicine, at the University of Edinburgh, and Hamilton was the predecessor of Sir J. Y. Simpson in the chair of midwifery. After paying the fine, Gregory is said to have remarked that he would gladly repeat the experience since he could not abide the pretentions of the nonentity who represented on their faculty the despised art of midwifery. The midwife custom prevailed at that time. Anesthesia came to us one hundred years ago. Compared with obstetrics it is in its infancy. Perhaps it is not strange that in many communities it has become a custom in our country to hold nurses responsible as technicians in anesthesia. Is this right or is it wrong? If we employ nurses or other nonmedical persons as technicians only, as assistants in the care and preparation of equipment, in supervising depressed patients, and in various other ways where diagnostic and therapeutic decisions are not involved, their services can be valuable. On the other hand it is unfortunate, and I believe definitely wrong, when doctors—whether surgeons or anesthesiologists—find it necessary to serve as a figurehead in assuming responsibility for the acts of technicians which involve decisions of a medical nature, decisions in which they take no part. A modern surgeon's duties require all of his attention during operations. Few anesthesiologists can be expected to maintain intelligent contact with more than 2 or 3 cases at one time. If we saddle nurses with the responsibility of anesthesiology and collect from our patients what amounts to professional fees for their services, pocketing the surplus or allowing them to do so, it constitutes exploitation of the public. If we attempt to teach nurses the science and art of anesthesia, that is also wrong because it exploits the medical students who wish to learn anesthesiology while in school and may wish to practice it after graduation. The student will not take kindly to the sort of instruction which can be superimposed on the preliminary training of a nurse, nor will he look with favor on a specialty which is in competition with those who are not medically trained. The argument is offered that an experienced technician often administers anesthetic drugs better than a physician. Individual comparisons may support such a contention. But similar individual comparisons may be made regarding the performance of minor surgical operations. A demonstration was made in earlier times regarding obstetrics. And yet we now approve of 20 to 30 per cent of the medical student's time, in his last two years, being devoted to instruction in obstetrics and gynecology. Midwives are rare. Rightly, nurses are given a course in obstetric nursing just as they ought to be in anesthetic nursing, but attempts to make anesthesiologists of people without a medical background will delay or prevent the future service which ought to be expected from anesthesiology. New drugs, new technics, the study of older ones, teaching and organization, all must depend on the competence of interested and enthusiastic physicians. Unless they are to be allowed to put in practice their discoveries, unless their specialty receives recognition and respect when it deserves it, interest and enthusiasm will fail. Capable brains will look elsewhere for employment.

SUMMARY

The public as a whole is not receiving the best service that anesthesiology is capable of supplying. A reason often cited is that anesthesiologists are not available in sufficient quality or number. This deficiency is due to a variety of abuses which have become common practice in the hospitals of this country. A custom, once established, is accepted indefinitely unless its effects are analyzed periodically. The present seems an auspicious time for us to devote some intensive consideration to existing abuses of and by anesthesiology with a view to improving the care of patients. Proper education of undergraduate and graduate students in our medical schools and hospitals is one method leading to improvement. Another is through the organization of departments of anesthesiology in medical schools and hospitals.

There is danger of the "vicious circle" type of influence on progress. To force nurses to assume the practice of anesthesiology interferes with proper teaching of medical students and young doctors. These in turn begin practice with inadequate knowledge of anesthesiology. As "authorities" in the profession, they later will accept inadequate service as satisfactory and withhold economic and professional recognition of anesthesiologists. Young doctors will hesitate to come to an unrecognized specialty. With fewer physicians, more anesthetic nurses will be required. The ultimate result might become a technical nonscientific service in anesthesia with no one in the medical profession competent to criticize it.

Abuses and undesirable customs of practice have crept upon us. In many instances this has occurred without those who are responsible being aware of the far reaching effects. The imminent return of many hundred medical officers whose interest in anesthesiology has been stimulated by the exigencies of military service creates an auspicious time to correct our mistakes.

Material and Immaterial Values of Science.—There are certain values of science which stand half way between the crudely material values on the one hand and the immaterial values on the other. Knowledge of the facts of equal inheritance from both parents (apart from the genes borne on the sex chromosomes) is important in framing people's general social outlook, but it does not directly provide them with food, health or shelter. The relative status of man and woman would be different from what it is if people believed that inheritance were wholly maternal (as the Trobriand islanders, for instance, are said to believe) or wholly paternal (as some biologists once thought). Again, people's social outlook is affected by their beliefs on the scientific question whether what are popularly called "acquired characters" are inherited. The function of science in reducing superstition comes into this category of values.—Baker, John R.: Science and the Planned State, New York, Macmillan Company, 1945.

"EARLY" CALCIUM UROLITHIASIS

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It has been shown that conditions in which immobilization of the individual is present, in which portions of the urinary tract are paralyzed and in which obstructions and infections of the urinary tract occur, or in which pronounced dehydration is present are likely to lead to calcium urolithiasis. Since the incidence of these conditions has risen decidedly as the result of the war, the importance of this phase of calcium urolithiasis has correspondingly increased, and I believe at the present time this is probably the most common type of urolithiasis.[1]

The probable mechanisms involved in the formation of the stone in these situations is discussed in a previous article. They involved essentially three factors: infection, stasis and hypercalcinuria. The outstanding fact in the vast majority of such cases is the presence of multiple small precipitates of calcium phosphate in the calices and pelvis of the kidney. These may form within eighteen days after the onset of the predisposing factors and grossly resemble the situation with sulfadiazine and sulfathiazole precipitates. These small stones may all pass; they may fuse to form one or more larger stones; they may act as the nucleus for larger stones; and they may be "silent" over long periods of time, at the same time causing very considerable and, at times, irreparable damage to the urinary tract before symptoms occur. This situation in the first six to eight months after the onset of the predisposing conditions before the stones have become intimately mixed with organic material and definitely solidified may be called "early" calcium urolithiasis. There are two outstanding characteristics of this phase of the condition: First it may be "silent"—produce no clinical manifestations—and, therefore, repeated x-ray examinations may be necessary to recognize it.[2] Second, the peculiar character of the stones formed under these conditions is such that special types of treatment are necessary if the best results are to be obtained.

It is my purpose in this paper to describe the clinical, pathologic and roentgenologic characteristics of these stones—so-called "early" calcium urolithiasis—and follow this with a discussion of the treatment of patients with this condition.

The outstanding fact of the early symptomatology of calcium phosphate renal lithiasis is that there are no symptoms. In other words, precipitation of the crystalloids and the formation of the stone take place gradually, with varying rapidity, under the influence of the predisposing factors, with no symptomatology, so that in many of these cases the diagnosis is first made by means of an x-ray film (table 1). After a varying interval symptoms occur in one or more of the following ways: (1) Irritation by small stones may produce hematuria, (2) the passage of a small stone down the ureter may produce ureteral colic, (3) infection may occur as the result of the obstruction caused by the stones. As a result of this there may be pyuria alone or with the generalized symptoms of infection: i. e. chills, fever, leukocytosis and pain over one or both renal regions.

The case illustrated in figure 1 gives the characteristics when infection is not present and no renal damage has as yet occurred. Note that the kidney and pelvic outlines are normal, there is only a slight hematuria and one attack of colic occurred four months after the onset of predisposing conditions. Note the presence of stones in each of the three major calices fitting about the pyramids. Note the excellent response to an acid ash diet and increased movement and urinary output. Such an early case remains in the "early phase" (i. e. nonhardened or consolidated stage) for many many months and therefore is amenable to irrigation therapy for a long time. This type of stone is ideal for dissolution by means of a combination of fluids, diet and irrigation therapy. Usually following treatment the urinary tract is left perfectly normal and the prognosis is excellent if the predisposing factors have been done away with. The pathologic changes in the cases of simple precipitations about the pyramids or in the kidney pelvis itself are very slight. The entire kidney and kidney pelvis are normal except for evidences of slight irritation of the mucosa by the precipitated particles. Occasionally, in patients with frank hypercalcinuria, precipitations are present in the tubules.

TABLE 1.—*Conditions Predisposing to Calcium Phosphate Urolithiasis*

1. Disease producing prolonged immobilization of the body:
   a. Fractures of the spine or extremities associated with prolonged immobilization of large bones
   b. Chronic osteomyelitis
   c. Chronic arthritis or other bone joint disease producing immobilization of large portions of the skeleton
   d. Neurologic damage as a result of trauma or disease producing prolonged immobilization
   e. Chronic visceral disease requiring prolonged recumbency
2. Changes in the urinary organs:
   a. Congenital anomalies associated with stasis
   b. Acquired obstruction—stricture of urethra and the like
   c. Paralysis of urinary passageway
   d. Introduction of infection into urinary tract
   e. Foreign body in urinary passageway
3. Endocrinopathies:
   a. Hyperparathyroidism
   b. Hyperthyroidism?
   c. Hyperpituitary disease?
4. Focus of infection elsewhere in body?
5. Vitamin deficiency or excess
   a. Vitamin A deficiency?
   b. Vitamin D excess
6. Metabolic abnormalities
   a. Idiopathic hypercalcinuria
   b. Changes in colloids?

Note: Conditions with question mark are put in mainly on a theoretical basis. Others are put in on the clinical basis.

In contrast, with the onset of infection there is much more rapid growth of stone, more extensive precipitation and, histologically, in addition to evidences of round cell and polymorphonuclear infiltration in the pyramids there may be precipitations of calcium phosphate in the tubules, ulceration of the tips of the pyramids and sometimes calcifications on these ulcerations (fig. 2). This occurs more frequently when infection is present than even in the presence of hypercalcinuria. Occasionally, possibly associated with focal infection, there is a localized area of ulceration with plaque formation such as described by Randall. The presence of severe infection alters the problem. Adequate drainage must be instituted at all costs and the infection controlled before irrigation therapy can hope to be successful. If adequate drainage cannot be instituted by ureteral catheter, open surgery must be done to do this. Otherwise very rapid growth of the stones will take place, because of

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1. Flocks, R. H.: The Preventive Treatment of Calcium Urolithiasis, Clinics **3**: 103-132, 1944. Harrison, J. H.; Botsford, T. W., and Pierce, F. R.: The Management of Urinary Lithiasis in an Army General Hospital, J. Urol. **53**: 282-294, 1945. Leadbetter, W. F., and Engster, H. C.: Problem of Renal Lithiasis in Convalescent Patients, ibid. **53**: 289-301, 1945. Milbert, A. H., and Gersh, I.: Urolithiasis in the Soldier, ibid. **53**: 440-446, 1945.

2. Flocks, R. H.: The Preventive Treatment of Calcium Urolithiasis: The Important Role of Early and Frequent Roentgenographic Examinations, J. Urol. **53**: 427-439, 1945.

the presence of the infection. If this is done early and adequate supportive and chemotherapy instituted to control infection, irrigation can then be carried out for removal of any stones which have not been removed at the time of the nephrostomy. If this is not done early

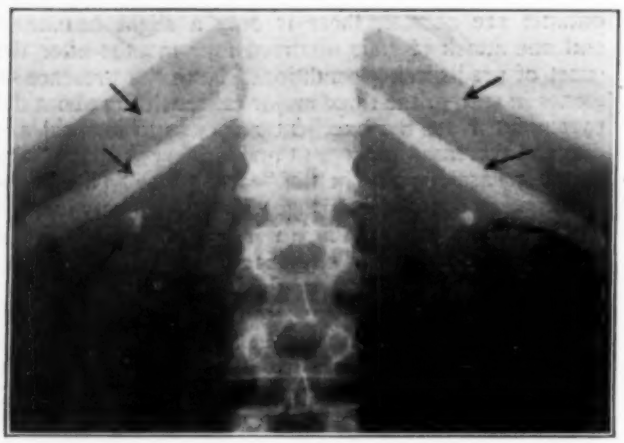

Fig. 1 (case 1).—Appearance of bilateral renal calculi after a period of immobilization for bilateral slipped epiphyses. Note how these follow the caliceal configuration. These passed after the institution of a regimen of motion, forced fluids and a high vitamin, acid ash diet.

and rapidly there is a very good possibility of the loss of the kidney because of extensive renal damage due to the infection.

In late chronic cases with little or no infection, or a good deal of infection, there is another complication, and that is distortion of the calices and kidney pelvis with disturbance of the peristalsis of these structures due to scar tissue and fatty peripelvic and pericaliceal infiltration, so that good drainage of these structures is difficult to obtain and as a result recurrence of stone formation is a very good possibility. (Figures 3 and 4 are illustrative of late calcium urolithiasis.)

The x-ray characteristics of early calcium phosphate urolithiasis are quite definite. When slight infection is present and the case is seen early, there is a typical irregular opacity suggesting depositions of calcium salts usually around the pyramids in the calices but occasionally in the kidney pelvis itself. (Figure 5 *A*, *B* and *C* illustrates this condition.) A short history between the predisposing conditions and such x-ray films are definitely indicative of early calcium phosphate urolithiasis. When severe infection is present there is usually some evidence of consolidation of the calcium particles into definite stone, and the configuration of the calices is not always followed (fig. 5 *D*). In addition, of course, there is evidence of dilatation of the kidney pelvis in some cases and other evidences of infection and obstruction. In late cases the stone shadows are much more dense and may or may not follow the configuration of the calix. The most characteristic thing, however, is the pronounced density of the stones (fig. 5 *E*). In addition, extensive changes in the calices, kidney pelvis and kidney, associated with the long and intermittent obstruction and infection, are usually present. When the stone shadows are very dense, the condition has definitely passed from the stage of early calcium urolithiasis to the stage of late calcium urolithiasis.

The nature of early calcium phosphate urolithiasis determines its treatment, and this treatment is different from the ordinary treatment of renal stones (tables 2 and 3). Ordinarily the treatment of renal stone consists in the removal of the stone, or stones, and the correction of any changes in the urinary tract which have become associated or have occurred as a result of the presence of the stone. Moreover, any predisposing or etiologic factors which might have caused the stone are also corrected if possible. In early calcium phosphate urolithiasis one faces a peculiar situation. The stone formation is usually primarily in the calices. It is very extensive throughout the kidney. The stone, instead of being a solid, hard object is a soft, mushy thing which cannot be easily removed by the ordinary pelvic or nephrolithotomy, so that following operative procedure the incidence of recurrent stone is very high because particles of stone are permitted to remain behind, infection is introduced and new stone formation rapidly occurs. Moreover, because of the extensiveness of the stone formation and possible involvement of multiple calices, much damage is done to the kidney, the calices and the pelvis, with a great likelihood of resulting scarring, stasis and new stone formation. All in all, the conditions are ideal for either pseudo or true recurrence of the stone following operative procedure (fig. 5 *B* and *C*). To cope with such a situation the operation of Dees [3] was devised. This consists of introduction into the kidney pelvis of a substance which will coagulate and collect all the particles of stone in its meshes and then the clot is removed through the incision in the pelvis. This is of definite help but usually

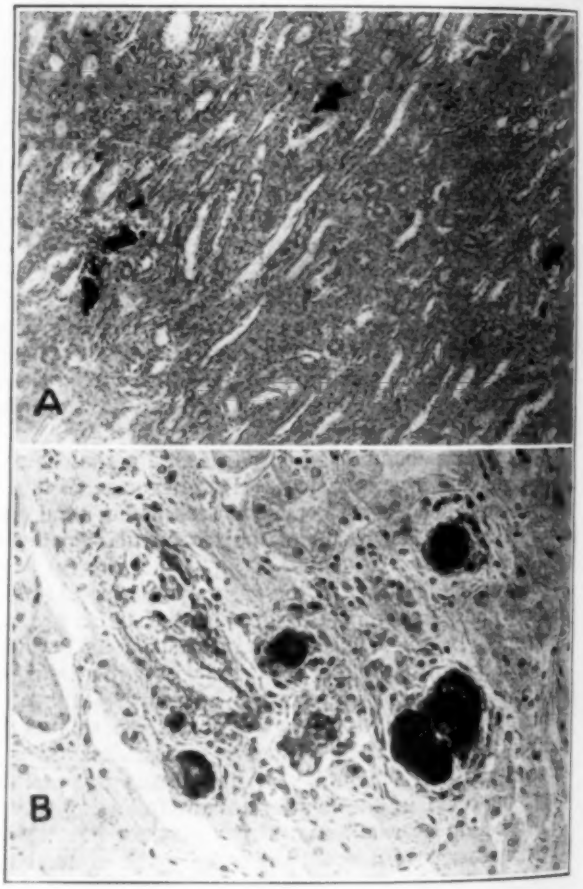

Fig. 2 (cases 2 and 3).—Microscopic sections of kidney to illustrate calcium phosphate precipitations in the renal tubules in cases of renal lithiasis associated with hypercalcinuria and infection.

leaves fragments behind in the pelvis even in favorable cases which act as the nuclei for recurrences.

By the early recognition of early calcium phosphate urolithiasis before decided consolidation of the stone

3. Dees, J. E.: Use of Intrapelvic Coagulum in Pyelolithotomy, South. M. J. **36**: 167-175, 1943.

has occurred, such an operation may be avoided. Irrigation therapy,[4] either through ureteral catheter, double ureteral catheter, nephrostomy or pyelostomy tube, intermittently or continuously, with acetic acid solutions, citrate solutions, citrate solutions with magnesium oxide,

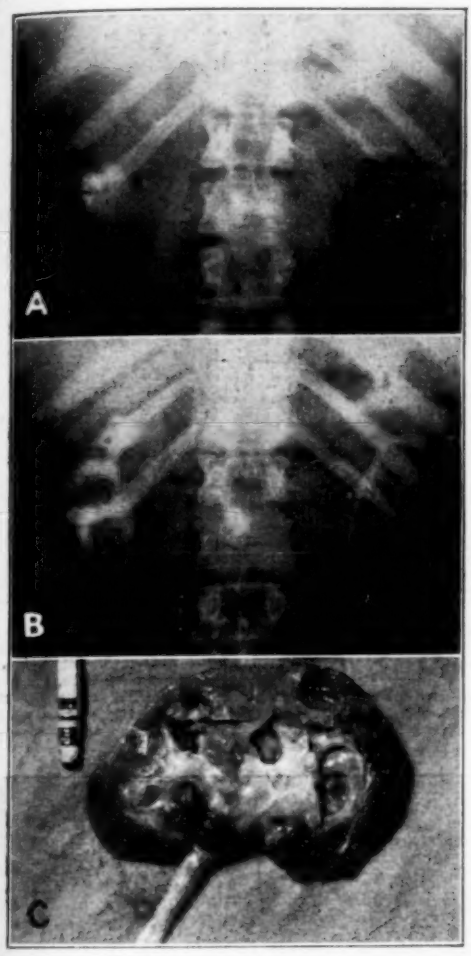

Fig. 3 (case 4).—Late calcium urolithiasis without infection: *A*, plain film; *B*, intravenous pyelogram; *C*, gross appearance of kidney.

malic acid solutions and solutions containing proteolytic enzymes, will usually break up the particles and cause them to pass with the least trauma to the kidney pelvis (table 3). Infection is controlled by means of sulfathiazole, penicillin, fluids and adequate drainage. By the early recognition of this condition and the recognition of the value and possibilities of irrigation treatment, many kidneys and many lives can be saved. In fact, in "early" calcium phosphate urolithiasis open operation is contraindicated until irrigation treatment has been given a thorough trial; and, if open operation with removal of much of the stone is performed, postoperative irrigation through a pyelostomy or nephrostomy tube is of great value.

Figures 1, 5 *A*, *B* and *C* and 6 show cases which illustrate the treatment for early calcium phosphate urolithiasis.

Figure 1 illustrates the simplest type of situation. The condition was recognized early. There was no infection, and it was possible to cause the breaking up of particles and their passage through the urinary tract by forcing fluids and an acid ash diet. Such a situation is rarely observed.

Figure 6 illustrates another situation. Here a ureteral catheter is passed up to the kidney pelvis and permitted to remain inlying. A continuous drip of dissolving solution, about 500 cc. in twenty-four hours, is permitted to run through this catheter into the kidney pelvis. This bathes the stone fragments and then passes down around the catheter into the bladder. Much fluid is given to keep the urinary output high. Manual irrigations of the kidney pelvis through the catheter are carried out thoroughly twice daily. Usually the ureteral catheter is changed weekly. In a few weeks the stone has been broken up and the particles have been removed. Infection is carefully controlled by all means at hand.

In cases in which there is much infection, in which a ureteral catheter is not well tolerated or in which dense stones (late calcium urolithiasis) are present, irrigation therapy alone is contraindicated. Open operation with removal of all stone possible followed by irrigation therapy through a pyelostomy or nephrostomy tube is the treatment of choice. Such situations are illustrated in figures 5 *D* and *E* and 7.

REPORT OF CASES

Case 1 (fig. 1).—A boy aged 16 years was placed in a double hip spica cast on Oct. 18, 1935. The urine was normal. He was in the cast until Dec. 24, 1935, at which time he had pain in the right side and hematuria. Films then (fig. 1) showed bilateral renal calculi with good functioning kidneys bilaterally and no deformity of the urinary passageways. The p_H of the urine was 7.0. The calcium and phosphorus of the blood were normal. The patient was started on motion, forced fluids and a high vitamin A acid ash diet. By May 26, 1936 he had passed many small stones, and a flat film showed only one small stone shadow in the left kidney. On Dec. 15, 1936 the urine was normal, with a p_H of 5.2, and the x-ray films were normal.

Case 2 (fig. 2 *A*).—A person aged 34 years, with a history of fracture of the pelvis and injury to the bladder and urethra, had a long period of recumbency, with the formation of bilateral

Fig. 4 (case 5).—Late calcium urolithiasis with infection. Note the hard calcium phosphate staghorn stone. Note the extensive destruction of calices and pelvis and fibrosis of the entire kidney with extreme fatty replacement. No calcium precipitations are present in the renal tissues, however.

renal lithiasis. Death was due to severe associated infection and uremia. There was extensive bilateral calcium phosphate renal lithiasis, with calcium phosphate precipitations in the tubules of both kidneys.

4. Hodge, I. F.; Hayllar, B. L., and Way, R. A.: A New Series of Citrate Buffers for Use in Urinary Tract Lithiasis, J. Urol. **48**: 204-206, 1942. Suby, H. I.; Suby, R. M., and Albright, F.: Properties of Organic Acid Solutions Which Determine Their Irritibility to the Bladder Mucous Membrane and the Effect of Magnesium Ions in Overcoming This Irritibility, ibid. **48**: 549-559, 1942.

CASE 3 (fig. 2 *B*).—A person was bedridden, with a large bladder carcinoma partially blocking both ureters. Bilateral extensive early calcium phosphate renal lithiasis was present, with infection. The combination of all this caused death. Microscopic study revealed extensive calcium phosphate precipitation in the tubules.

CASE 4 (fig. 3).—A white man aged 47, who appeared healthy, was admitted on Feb. 7, 1944 with a history of intermittent attacks of pain going back to 1935, always on the right side. No definite etiologic factor could be ascertained. The urine showed a p_H of 6.0 and was normal except for an occasional red blood cell per high power field. Because of the presence of a normal left urinary tract and a coraliform late calcium urolithiasis on the right side with a good deal of distortion of the lower calices on the right side, irrigation therapy alone or after nephrolithotomy was felt to be contraindicated, and right nephrectomy was performed Feb. 17, 1944. The result thus far has been excellent.

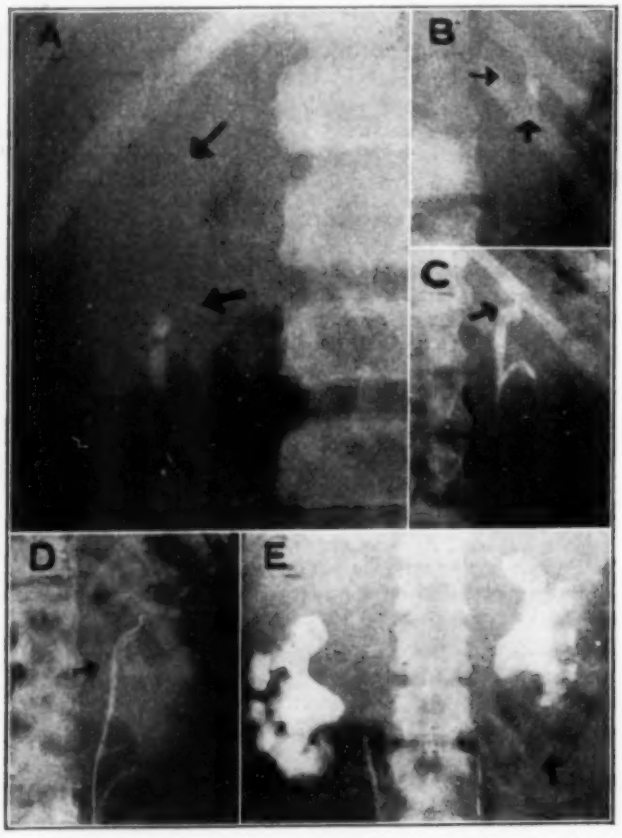

Fig. 5.—Early calcium phosphate renal lithiasis: *A*, early renal lithiasis appearing eighteen days after the onset of recumbency for pelvioplasty on opposite kidney. Routine roentgenographic check-up shows stones in the lower calices of the right kidney. These are characteristically not very dense and have the V shaped appearance because they follow the configuration of the calices. Irrigation daily through an indwelling ureteral catheter with 0.25 per cent acetic acid solution caused these to disappear in five days. *B* and *C*, early calcium phosphate urolithiasis in the upper calix of the left kidney in case 6. Note the lack of density of the stone shadow and the outline of the stone which follows the configuration of the calices. Note the lack of deformity of the pyelogram. Such a situation is ordinarily ideal for irrigation therapy and unsuitable for open operation. *D*, early calcium phosphate urolithiasis. Plain film. Note the lack of density of the x-ray shadows with the consolidation of the stone so that it no longer follows the caliceal configuration. Such a case is suitable for irrigation therapy by ureteral catheter only if infection can be easily and rapidly controlled. It is probably best treated by pelviolithotomy followed by irrigation therapy and intensive treatment for infection. *E*, late calcium phosphate urolithiasis. Plain film showing extensive bilateral staghorn calculi. Note the intense density of the shadows. This is characteristic of late calcium phosphate urolithiasis. Such stones are best treated by open surgery. If the condition is unilateral, nephrectomy is indicated. If nephrectomy is contraindicated, combined pelvic and nephrolithotomy, followed by irrigation therapy, is indicated. See figure 7. This was done in this case with good results on the right side. The left side is to be done at a later date.

This was an instance of extensive late hard calcium urolithiasis without infection. No precipitations were found in the tubules on microscopic study. If bilateral stones had been present this would have been a perfect case for nephrolithotomy with postoperative irrigation therapy.

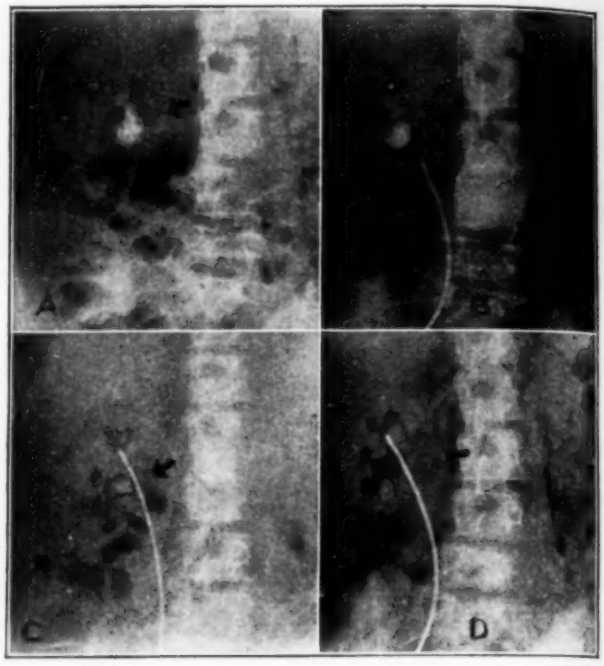

Fig. 6 (case 7).—*A*, appearance at time patient was admitted to the hospital; *B*, plain film showing condition three days later, when irrigation had been going for two days; *C*, plain film on April 2, after twenty days of irrigation therapy. *D*, air pyelogram on April 16, thirty-four days after the institution of irrigation therapy. The stone has completely disappeared and the kidney infection is completely cleared up.

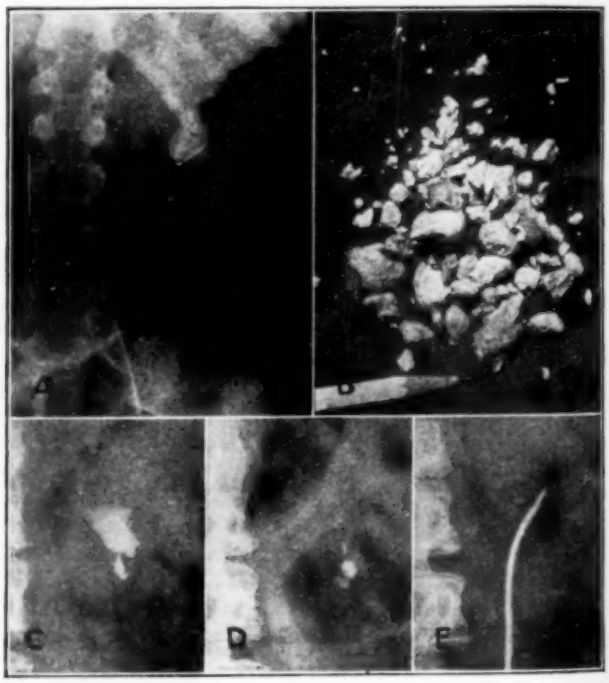

Fig. 7 (cases 8 and 9).—*A*, appearance in case 8 prior to operation; *B*, fragments removed through pelvic incision. *C*, condition in left kidney in case 9 prior to operation; *D*, plain film with stone shadows remaining after operation and prior to irrigation therapy; *E*, plain film illustrating condition after four months of irrigation therapy; the fragments have all disappeared.

CASE 5 (fig. 4).—A white man aged 39 was admitted on Nov. 9, 1944 with a long history of recurring left perirenal abscess formation following a gunshot wound in that region

in 1936. He now is chronically ill with tenderness over the region of the left kidney. The urine is alkaline and badly infected. Films reveal a normal right urinary tract and a nonfunctioning calculous pyonephrosis on the left side. Left nephrectomy was performed on November 13 with excellent postoperative result.

CASE 6 (fig. 5 *B* and *C*).—A white man aged 33, admitted to the University Hospital on Feb. 8, 1940, had a story of having an appendectomy in May 1939 with postoperative retention necessitating many catheterizations. These were followed by evidences of urinary tract infection. Symptoms on admission were aches and pains in the left upper abdomen. Physical examination showed definite evidence of a moderate chronic prostatitis and some pus in the left kidney urine, which was alkaline and showed Proteus vulgaris on culture. The plain film, *B*, showed the calculus as described in the upper calices of the kidney. *C*, the intravenous pyelogram, showed no deformity of the kidney pelvis and good function of the kidney. The findings and the history were typical for early calcium phosphate renal lithiasis. With our present knowledge of this condition and with the improvements in the technics of irrigation therapy, irrigation therapy would have been carried out in this case. However, at that time, February 1940, a left nephrolithotomy was decided on. The left kidney was exposed, and this appeared essentially normal. The stone, which was found to be really a cast of the upper calix, was soft and mushy, and part of it stuck to the tips of the calix. It broke into many small fragments when an attempt was made to remove it. Because of this and because of hemorrhage from the kidney substance, nephrectomy was decided on and performed. The postoperative recovery was excellent, and the patient has continued to be in good health. Microscopic study of the removed kidney showed this to be essentially normal except for a mild chronic inflammatory infiltration adjacent to the epithelium which had been in contact with the stone. There was no evidence of calcium precipitation in the tubules.

Case 7 illustrates (1) the appearance of a staghorn calculus in the right kidney associated with immobilization due to generalized atrophic arthritis, (2) the typical x-ray characteristics of relatively early calcium phosphate renal lithiasis—lack of density in most of shadow, the following of the configuration of the calices, and absence of evidence of infection, and (3) the dissolution of a staghorn calculus by ureteral catheter irrigation with citric acid and malic acid solutions with magnesium oxide.

TABLE 2.—*Preventive Treatment of Calcium Phosphate Urolithiasis in Patients Who Are Extensively Immobilized Over Long Periods of Time*

Measures	Accomplishes	Comment
1. Maintenance of large fluid output	a. Counteracts stasis by producing a steady flow of urine b. Diluted calcium concentration especially important during period of hypercalcinuria (first 6 to 12 weeks of immobilization) c. Minimized likelihood of infection d. Washes out débris and small calcium precipitates	a. Measure intake and output carefully; remember in cases of neurologic involvement that residual urine may cause inaccuracy in output measurement
2. Control of diet High vitamin A and B acid ash diet usually used	a. High vitamin A and B improve epithelial nutrition b. Increase acidity of urine; calcium phosphate is more soluble in an acid than in an alkaline urine	a. Check urinary p_H daily with nitrazine paper b. Discontinue acid ash diet if urine remains alkaline from any cause such as infection with urea-splitting organisms
3. Control of stasis a. Movement of patient b. Provision of adequate drainage by catheter or surgery if necessary c. Maintenance of a large fluid output	a. Makes sure that no portion of urinary tract is dependent or undrained for too long a time b. Minimizes infection c. The use of a catheter makes possible irrigation of pelvis or ureter with special solutions such as citric acid and malic acid solutions	
4. Control of infection a. Maintenance of large fluid output b. Adequate drainage c. Chemotherapy: 1. Sulfacetimide 4 Gm. daily in drug of choice 2. Sodium sulfathiazole 4 Gm. daily 3. Other sulfonamide 4 Neoarsphenamine 0.3 Gm. two times weekly in some staphylococci infections 5. Penicillin, very useful	a. Decreases particles in urine (pus and epithelial débris, which may act as nuclei for stone formation) b. Infection with urea-splitting organism produces alkaline urine, which causes precipitation of calcium phosphate	a. Watch urine p_H with nitrazine paper b. Study centrifuged urine specimen daily for pus cells
5. Continuation of treatment for 3 months after immobilization has ceased	To remove any small precipitation which may have formed during period of stasis and hypercalcinuria	
6. Frequent radiographic check-up examinations during illness and every 3 months for one year after immobilization has ceased	This is very important; small precipitates may not be visualized in early urograms but may be visualized later after they have grown; many stones (especially in patients with neurologic lesions) may be silent for years and thus produce irreparable renal damage unless they are visualized by x-ray examination and treatment instituted	

Note: Henline has shown that the emptying time of the renal pelvis is greatly increased by a small urinary output and decreased by a large fluid output (Lowsley and Kirwin: Clinical Urology).

Case 7 (fig. 6).—A white woman aged 56, first seen in the University Hospital in 1937 with generalized atrophic arthritis, showed little improvement on treatment for this. She was admitted on March 12, 1945 for a check up examination. A plain film showed extensive cholithiasis and a staghorn calculus in the right kidney. The pyelogram on the left side was essentially normal. The urine had a p_H of 7.0 and a moderate number of pus cells per high powered field, with a mixed infection with colon bacilli and staphylococci. An indwelling ureteral catheter was put in place and the patient given forced fluids, penicillin therapy and irrigation therapy through the ureteral catheter on alternate weeks with citric acid magnesium oxide and Zephiran and malic acid magnesium oxide and Zephiran solutions. The results are shown in figure 6.

Cases 8 and 9 illustrate combined nephropelvic lithotomy and large staghorn calculi followed by irrigation treatment to remove any fragments of stone remaining. The problem of complete removal of remaining frag-

ments in such cases has been a bugbear because of extreme renal damage caused by many nephrotomies in order to remove all fragments. By means of postoperative irrigation therapy this difficulty has been overcome in many cases.

CASE 8 (fig. 7 *A* and *B*).—A white man aged 48 entered the hospital on Jan. 3, 1945 with a long history of urethral stricture and intermittent attacks of pain and renal infection on the left side. Physical examination showed the presence of a small stone in the lower calix of the right kidney and a large staghorn calculus in the left kidney with bilateral renal infection. On January 12 pelvionephrolithotomy was carried out. In order to avoid large incisions through the kidney substance and thus preserve as much renal substance as possible, the stone was broken up through the incision in the pelvis with a strong forceps and *B* illustrates the fragments removed through the pelvic incision. *A* shows the plain film taken prior to the operation. Following this procedure a nephrostomy tube was left in place and a continuous drip of 0.25 per cent acetic acid solution was alternated with citric acid magnesium oxide solution. The patient left the hospital on February 7. The incision was well healed, and no fragments were remaining that could be demonstrated on the x-ray film. The kidney was functioning on the intravenous pyelogram. He had in the meantime passed the stone from the right kidney.

TABLE 3.—*Treatment of Patients with Calcium Phosphate Renal Lithiasis*

1. All measures outlined under Preventive Treatment of Calcium Phosphate Urolithiasis in table 2
2. Institution of adequate drainage:
   a. Urethral catheterization
   b. Ureteral catheterization
   c. Nephrostomy
   d. Pyelostomy
3. Irrigation of urinary passageway with antiseptic and "dissolving" solutions to control infections and dissolve and remove fragments of stone
   Valuable solutions are: 0.8 per cent sulfanilamide solution
   0.25 per cent acetic acid solution
4. Avoidance of pseudorecurrence
   When removing multiple stones or a branching stone, x-ray check-up during the operation is of great value in preventing a small stone from being left behind
5. Calicectomy and other operative procedures on urinary tract to correct acquired or congenital urinary stasis
6. Surgical lithotomy, or nephrectomy

* Citric acid (monohydrous)	32.3 Gm.
Magnesium oxide (anhydrous)	3.8 Gm.
Sodium carbonate (anhydrous)	4.4 Gm.
1/20,000 aqueous Zephiran q. s. to	1,000 cc.
† Malic acid	32.3 Gm.
Magnesium oxide (anhydrous)	3.8 Gm.
Sodium carbonate (anhydrous)	4.4 Gm.
1/20,000 aqueous Zephiran to	1,000 cc.

Proportions of acid to sodium carbonate can be changed to raise *pu* and thus lessen irritability if this is present (see Hodge, et al).

* Citric acid solution in 1/20,000 Zephiran.
† Malic acid solution in 1/20,000 Zephiran.

CASE 9 (fig. 7 *C*, *D* and *E*).—A white woman aged 54 was seen in conjunction with Dr. A. G. Fleischman of Des Moines, Iowa. She had a long history of bilateral nephrolithiasis and ureterolithiasis. When Dr. Fleischman saw her in June 1943 she had a stone in the lower calix of the right kidney and a large stone in the left kidney pelvis and several smaller stones in the lower calices of the left kidney pelvis. She was having symptoms of pain and infection on the left side. Dr. Fleischman exposed the left kidney and removed the large stone. Because of bleeding from the nephrotomy wound he was unable to remove the smaller stones, and he inserted a nephrostomy tube for drainage. The patient got along nicely and I saw her on June 31. At that time she was feeling well and she had at least four stones, the smallest about the size of a pea and the largest about 1.5 cm. in diameter, located in the left kidney pelvis. Irrigation with citric acid magnesium oxide solution was carried out intermittently through the nephrotomy tube. In four months the fragments had completely disappeared.

THE REMAINING TASK

MAJOR GENERAL NORMAN T. KIRK
The Surgeon General

While the Regular Army, of which I am an officer, furnished the nucleus of the Medical Corps, its civilian components did the professional work. Our role was necessarily organizational and administrative; the civilian physicians took over from that point. We issued the administrative directives and implemented the professional policies; the basis for them was established by the professional consultants who came into the corps from civilian practice, and they were applied by civilian physicians. Credit for the results, therefore, rightly belongs not so much to the methods which were employed as to the men who employed them.

In 1940, just after the fall of France, the United States Army consisted of approximately 250,000 men and the Medical Department of about 1,600 officers, of whom about 75 per cent were in the Medical Corps. By Dec. 7, 1941 there were 1,613,000 men in the Army and 11,390 officers in the Medical Corps. On V-E day there were some 8,300,000 men in the Army and some 47,000 officers in the Medical Corps. The increment in the Army was chiefly by way of Selective Service. The increment in the Medical Corps consisted entirely of volunteers. I should be less than fair if I did not pay tribute to the physicians who served at home and, in particular, to the 33,000 who voluntarily and without recompense manned the Selective Service boards all over the country.

The American armed forces had better medical care in World War II than the soldiers of any army ever before received. More men were saved from death, more men were returned to military usefulness and more men were spared suffering and mutilation and disfigurement than was dreamed possible at the end of World War I or, for that matter, at the beginning of World War II.

In the magnitude of our task we inevitably made mistakes. Some men were given too much rank for their qualifications, and some men, many men, had far too many qualifications for their rank. As the war progressed, and as classification of medical officers according to their abilities and training became more accurate, many of those errors were corrected. Even if they remained uncorrected they were always honest errors, which arose chiefly from miscalculations and from human frailties of judgment.

Inevitably also in many instances we used our sparse military personnel uneconomically. Part of the wastage occurred because war itself is wasteful. Part of it occurred because the provision of medical care during wartime must be guided by the exigencies of battle and by strategic demands. In other words, the medical effort is always ancillary to the fighting effort. If you will recall that the preparation for D-day took well over a year, that the staging for the invasion occupied something over twelve weeks and that medical units had to be prepared and had to stage along with the fighting units, you will understand why, for long periods of time, a certain proportion of our professional skill was incompletely utilized.

Many instances of wastage were apparent rather than real. I think, for example, of a hospital with a 90 bed capacity on the coast of Delaware. We tried always to keep a highly competent surgeon there, though his

Read at the annual dinner of the Society of Surgeons of New Jersey, Plainfield, N. J., Jan. 30, 1946.

services were never fully utilized. But that particular hospital was part of a coast artillery station at the mouth of a river which has been described as the most heavily mined 18 miles in the world. It also served an air field a few miles away where navy pilots practiced blind night landings in preparation for night carrier landings. We still try to keep a highly competent surgeon at this hospital. At present the mines at the mouth of the river are being removed and detonated, and I am told that that process is more dangerous than laying them. Moreover, the Coast Artillery personnel is now conducting experiments with 16 inch guns. Neither during the war nor since have there been any serious accidents at that particular station, but the potentialities continue to exist and we must continue to be prepared for what might happen there, just as we were formerly prepared for what might have happened.

I know that civilian physicians do not take kindly to the regimentation of the Army. One of our most delicate problems was and still is to strike a balance between the man who keeps enough of his native independence to be a usefully aggressive officer and the one who keeps so much that he ceases to be useful at all to the Army.

Regimentation is usually much less arbitrary than it seems. Early in the war large numbers of operations were performed for such conditions as internal derangements of the knee, herniated vertebral disks, varicose veins, varicoceles and pilonidal sinuses. In army parlance these conditions were classified as EPTI, that is, existing prior to induction. Within a year operations for most of them had been stopped by directives from the Surgeon General's Office. Men with these conditions either served with them, on limited service if necessary, or were separated from service because we had found, by painful experience, that in attempting to correct them we were creating a host of other problems. Pilonidal sinus is the outstanding illustration. The technics for its correction are multiple and are correspondingly unsatisfactory. They proved even less satisfactory in the Army than in civilian life. In the first nine months of 1942 in twenty hospitals of a single service command there was an estimated loss of 30,000 man days as the result of surgery for pilonidal sinus alone. Multiply that loss by nine service commands and you will understand why a directive was issued forbidding elective surgery if the condition was symptomless and permitting only incision and drainage if the sinus or cyst had become infected.

CARE OF THE PARAPLEGIC

Against these confessions of difficulties and errors—and if time permitted I could, of course, make many more—let me describe an achievement which I think you will agree compensates for many errors. The program for paraplegics concerns only a relatively small number of men, but to me it is a shining example not only of the professional competence of the physicians who served and are serving in the Army but even more of their humanity.

Until this program was instituted, men with spinal cord injuries and resulting paralysis were regarded as hopeless invalids, and I fear that they were treated as such. That attitude has been completely reversed by the Army Medical Corps, which met the problems of this injury with all the resources of the profession.

First, operation was performed promptly in all proved or suspected cases of spinal cord injury, chiefly because exploration proved to be the only sure way of determining whether or not the condition could be relieved surgically. The operations were done only by skilled neurosurgeons, and the risk was incredibly small; thirty-two consecutive operations were done at one hospital, for instance, without a fatality. Operation was also done promptly; in one reported series 57 per cent of the patients showed improvement when they were operated on within five days after their injuries, against only 10 per cent when operation had been deferred beyond this period.

As soon as possible after wounding or operation the men were evacuated to the Zone of the Interior, where they were concentrated in nineteen special centers, again under neurosurgical direction. The next phase of management, however, was chiefly urologic. Suprapubic cystostomy had been done in all such cases before evacuation. Now the problem was to substitute a urethral catheter for the suprapubic catheter and then to establish a reflex bladder, which was usually accomplished by the institution of tidal drainage, and to prevent (or correct) urinary infection while these objectives were being achieved. Technic is no part of my story, but I do want to emphasize that this was the urologist's day and that he had specially trained corpsmen to help him, one or more of whom were constantly on duty in every paraplegic ward. No untrained attendant ever participated in the care of a paraplegic's bladder.

It was also the urologist's function to see to it that urinary calculi did not develop or that they were treated without delay if they had developed. Since stones have been reported as early as one month after recumbency, patients were investigated from this angle as soon as they reached Zone of Interior hospitals. By prophylactic and conservative measures, in which such a simple but time-consuming procedure as frequent changes of position played a highly important part, most patients were kept free of stones, and with negligible exceptions stones which had already developed were eliminated without operation.

As to decubitus ulcers, patients who arrived in the Zone of the Interior with pressure areas properly protected seldom developed them here because every possible measure was employed to keep them free of this complication, frequent changes of position again being the most important part of the regimen.

Ulcers which had already developed furnished a major problem. They were usually multiple. At one center 130 ulcers were at one time under treatment in 45 patients. At another center 10,000 dressings were done in one month for this cause alone. Some lesions measured from 6 to 8 inches in diameter and involved the entire sacral area.

Ulcers were vigorously attacked from every angle by such obvious measures as support of pressure points, frequent changes of position, scrupulous attention to cleanliness and unremitting endeavors to keep the patient dry, and by aggressive surgical efforts to close the wounds by the principles of plastic surgery. These measures were estimated to have saved from six to twenty-four months of treatment in some cases. Not infrequently they saved life.

Perhaps the most important advance in the management of decubitus ulcers was the discovery of the enormous loss of protein by this route. In some instances the measured loss was as high as 50 mg. daily, and reversal of the albumin-globulin ratio was frequent. To attain a zero balance under these circumstances, let alone a positive one, was no simple matter.

It required the introduction into the patient of 150 to 175 mg. of protein daily. Whole blood and plasma were useful in emergencies, but the long-term solution of the problem required that most of the protein be introduced by way of the diet in a readily assimilable form. In such cases the internist took charge, and dietitians, under his direction, became responsible for individual patients.

Finally came the matter of ambulation. We did not deceive ourselves about that. Ambulation is beyond the capacity of all but a few paraplegics. But ambulation in the sense of getting about by braces and crutches sufficiently to care for themselves, is a definite possibility for most patients with cord lesions at or below the tenth dorsal vertebra and is a more guarded possibility for patients with lesions below the second dorsal vertebra. In lesions above that level ambulation is not possible, but a wheel-chair existence is.

In other words, so far as this program was concerned, a bedridden patient was simply not conceived of. When a man reached a paraplegic center it was taken for granted that he would be out of bed promptly, or at least as soon as certain physical deficiencies had been corrected, and that he would attempt to walk with equal promptness. An unexplained neurologic, vascular, cardiovascular and nutritional improvement always occurs when these patients begin to move about. Passive exercise is not a substitute for early attempts at ambulation and was never so regarded. To get the patient out of bed and on his feet was the goal in every paraplegic center for every man treated in it. We hitched our wagon to the stars, and we got where we were going in a surprising number of cases.

There has been nothing like these results in the previous history of neurosurgery; they were achieved against untold odds. The urologic care of the paraplegic is a never ending struggle against infection. Instruction in ambulation is tedious and difficult for instructor as well as for instructed. The care of decubitus ulcers is often a loathsome task, and the details of their prevention are endless. But in these army centers these difficulties were overcome by the unified efforts of neurosurgeons, plastic surgeons, orthopedic surgeons, urologists, internists, nutritionists, nurses, dietitians, physical therapists and hospital corpsmen.

The neuropsychiatrist was naturally called in when he was needed, but most of these patients were not neuropsychiatric and they were not permitted to become so. One reason was that they were kept busy. They were taught printing, woodwork, radio repairing, watch repairing, typewriting, photography and similar occupations at which even a handicapped man can do a day's work and by which he can earn a decent living. Finally, their domestic and family relationships were kept on an even keel.

The care of these patients was based above everything else on the preservation of sound morale. Every person who came into contact with them played his part in its preservation, but the keystone of the arch was the ward physician. He integrated every detail of supervision and management. He could not himself do for them everything that was done, but there was no detail of their care which he did not know intimately. He made regular ward rounds, of course, but he also went around on Sundays and holidays, and at odd times during the day and at night, and he became the confidant and friend of the men as well as their medical adviser. I doubt, indeed, if the doctor-patient relationship which developed in these wards has ever been equaled in the history of medicine; I am sure that it has never been surpassed. When a paraplegic patient was concerned, the ward physician never took no for an answer.

At one paraplegic center a young first lieutenant for six months, without other help, served as ward officer for 109 paraplegic patients in forty-seven different rooms. Christmas came soon after he was put in charge, and because he had imagination and sympathy as well as medical ability he went to the commanding officer with the suggestion that the men be permitted to have their families in with them for Christmas dinner. The commanding officer, I presume automatically, said no. Said the young officer—who had been an officer only four months—"I demand that these men have their families for dinner. They may not be here next Christmas. They have given everything for their country. They deserve to have their families with them on Christmas, and damn it, they are going to!" They did have them, and no one in the hospital had more to do with the success of the dinner than did the commanding officer. When a ward physician carries the ball for his patients in that manner—men have been court-martialed for less—you can readily understand why the morale in paraplegic wards, which was formerly the worst in every hospital, is now much the best.

OTHER TASKS

This program illuminates much of our remaining task. At the end of August 1945 there were 312,000 patients still in hospitals. At the end of December there were 180,000, 1,400 of whom were paraplegics. By next June it is estimated that there will still be approximately 70,000, of whom at least 600 will still be paraplegics.

Add to those paraplegics other categories of patients who also present special needs. At the end of November there were 11,350 patients in the nine centers set aside for plastic and hand surgery, who, it was estimated, still needed almost 31,000 operations. The plastic surgeons who had been working twelve to fourteen hours daily six days a week to carry this load were most of them eligible for separation on points. We froze them in the Army. I explained to them why we had to do it. They understood, and they are still doing their job. So are the physicians who are taking care of the 5,000 neuropsychiatric patients now in the hospital, 2,000 of them in closed wards, and the 1,000 patients with tropical diseases, the 1,800 with tuberculosis, the 300 blind men who are being rehabilitated and the thousands of other casualties of the war who, by the orders of the Chief of Staff, the Secretary of War, and the President of the United States, must not be discharged to civilian life or transferred to the Veterans Administration till army doctors have done for them all that modern medical science and skill can do.

The casualties of war, however, are only part of our medical responsibility. In view of the current agitation concerning demobilization I think it particularly important to emphasize our other tasks. I do not shut my eyes to the discontent which I know many medical officers must feel with the working of the army discharge system, though I am glad that the near hysteria which has afflicted some portions of the service has been notably lacking in the Medical Corps. I should be the last to claim that the system itself is perfect. I think it fair to emphasize, however, that even a perfect system cannot be perfectly applied and that individual excep-

tions, even though in most cases the exception will be found, on investigation, to be more apparent than real, always make for bitterness. I realize fully that the system has been particularly unfair to doctors, and particularly to doctors who are critical specialists. For most of them it has simply been abrogated. Points or no points, we had to keep them in service.

As General Eisenhower explained to Congress recently, demobilization has in general proceeded so successfully to date that two incompatibles have met head on sooner than had been expected, the speed of demobilization and the cold, hard facts of the commitments and obligations which this country has assumed both at home and abroad. Let me outline them in brief as the Chief of Staff described them in detail. They include: Occupation duties in Germany, Austria, Japan, Korea and certain Pacific islands. Supervision of government in enemy countries suffering from wartime devastation and shortages. Demolition of fortifications and other installations, including war-making potentials, of which 3,000 must be destroyed in Germany alone. Policing of international boundaries, of which there are 2,000 miles in Germany alone. Guarding of military stores, bridges, communication systems, electric installations and anything else which might be sabotaged. Construction and maintenance of transportation and communications systems. Constant surveillance of enemy populations, with the rounding up of war criminals still at large and the suppression of crime, which in Germany, at least, is rampant. Provision of emergency supplies of food and other stores for enemy countries. Maintenance of law and order in such friendly countries as the Philippines, which are not yet prepared to take over this task. Registration of the graves of the United States soldiers and sailors who died in action overseas. Supervision of prisoners of war in conquered countries and in the United States. Operation of air transport in all enemy countries. Operation of centers for displaced persons, of which there are 365 in Germany and 85 in Austria. Protection not only of captured matériel but of billions of dollars' worth of United States property all over the world, including such areas as Burma and India, in which we have no occupation duties. Operation of induction centers in the United States and conduct of the training of newly inducted soldiers both at home and overseas. Operation of camps, posts and other installations, such as staging areas and ports of debarkation in this country and overseas. Processing of separated personnel in the United States. It would be, said General Eisenhower, a final burst of irony to separate trained personnel (who have the points for separation themselves) serving at the separation centers and thus further delay large-scale demobilization.

These tasks, the Chief of Staff concluded, were assigned to the Army by Congress, and only competent authority, presumably Congress, can remit them. Some of them necessitate constant activity. Some of them require little more than the presence of troops against a potential emergency. But you do not, he concluded, send the firemen home when you pass a firehouse and see them with apparently nothing to do but play checkers.

No more can you send the doctors home under the same circumstances. General Eisenhower did not specifically mention the Medical Corps in the course of his remarks to Congress, but naturally he did not have to. Wherever American soldiers are on duty anywhere in the world, there must medical officers be with them. The flow of battle casualties has mercifully ended. But young men are still subject to all the usual diseases, from colds in the head to acute appendicitis. They are still subject to accidents, some of them inherent in their dangerous tasks, some of them, as an English physician caustically put it, arising from "the stupidities of fools." They still must be protected against tropical diseases. They still must be protected from the diseases born of wartime devastation and malnutrition. They still must be looked after at staging areas and on their way home. They still must be examined most thoroughly at separation centers, both for their own sakes and for the sakes of the taxpayers who will later foot the bill for errors as well as for genuine disabilities. Those who will replace them at home and overseas must still be examined at induction centers. Prisoners of war must still be cared for. Displaced persons are frequently medical problems before they are anything else.

In short, the Medical Corps can no more be permitted to fall apart, to "demobilize by demoralization," than can the rest of the Army. The physicians in civilian life would no more wish that to happen than do the physicians still in uniform. All military service, as has been well said, entails some hardship. The hardship to be borne by men who must remain in uniform longer than they like is simply an essential part of what has gone before. It cannot be evaded without placing in jeopardy the victory so arduously won in combat. It is indispensable to the completion of the job.

MEDICAL EDUCATION IN EUROPE

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European medicine has gone through a series of cycles, various countries taking the lead for one or more generations and then through the effect of wars or national pride falling behind, i. e. Egypt, Babylon, Greece, Rome and Italy in succession during the old days, and France, Great Britain, Germany and the United States during the last century. This rise and ebb of medical leadership should warn us that we may be at a dangerous peak and that either we must continue to climb or we shall fall like the others.

In the nineteenth century, medical schools were of three types: clinical, university and proprietary.[1] In France and Great Britain the type was clinical, having grown out of the hospitals. However, in France the preclinical sciences fared badly, while in some, though not all, of the British schools general advances occurred in all the medical sciences. The university type of medical school prevailed in Germany, Denmark, Sweden, Norway, the Netherlands and German speaking Switzerland, largely on a lecture basis. Most of our own schools of that period were proprietary.

From the Department of Pediatrics, Duke University School of Medicine and Duke Hospital.

Read before the Forty-Second Annual Congress on Medical Education and Licensure, Chicago, Feb. 11, 1946.

This report is based on three years as a medical student at a British university before and during World War I, seven summers between Worlds Wars I and II visiting European pediatric clinics, being able to spend this past summer in England and Germany through the kindness of Major Gen. Morrison C. Stayer, Brig. Gen. James Stevens Simmons and Col. Thomas B. Turner, and last but not least conversations last summer in London and last week in Durham with Dr. Daniel P. O'Brien, who represents the Rockefeller Foundation in Europe. The observations of Major H. M. Rozendaal, Capt. J. S. Lichty and Dr. E. Y. Hartshorne, whom I accompanied on their survey of schools in the U. S. Zone of Occupation, also have been very helpful.

1. Flexner, A.: Medical Education in Europe, Bull. 6, New York, Carnegie Foundation for Advancement of Teaching, 1912; Medical Education: A Comparative Study, New York, Macmillan Company, 1925. Rappleye, W. C.: Final Report of the Commission on Medical Education, New York, 1932.

The evolution of medical education started with the twentieth century in Europe and with the 1915 purge in our own country,[2] and these three types of medical schools became less distinguishable. By the end of World War I, all medical students received more or less instruction in the whole gamut of medical sciences from biology to psychiatry and public health. Except for France, in which clinical work is done in the first year, the curriculums at all European and British schools are much the same, starting with the premedical sciences and continuing five to seven years.[1] In one respect this schedule is better than ours, namely that the medical school either is responsible for premedical education, as at St. Bartholomew's, or controls it through examinations, as in the rest of Europe. American medical students would have a far more useful premedical preparation than is furnished at present by many of our colleges and universities if it were supervised by the medical schools.[3] Ours is the only country in the world in which premedical educafion is unsupervised.

Although the curriculums were more or less similar, medical education in the various European countries differed tremendously during the lull between World Wars I and II. It was good in Scandinavia, the Netherlands and Switzerland, variable in Great Britain and much lower than ours in the other European countries. Obviously, factors other than the curriculum are responsible, the three most important being the faculty, the students and the type of teaching. In the countries in which medical education is good the faculty is appointed on merit and the students are selected, rarely exceed one hundred in a class and learn "by doing" through practical laboratory and ward work. The following alphabetical survey is, like politics and religion, open to argument, and I hope that it will produce discussion helpful both to European and to American medicine:

Belgian medicine suffered from Flemish and Walloon squabbles and lacked a national medical policy. Except for several former CHB fellows and an occasional Nobel prizewinner, Belgium has little with which to rebuild. However, 150 Belgian scientists have recently been sent to Great Britain for study.

Medicine in the prewar Balkans was very poor. In Bulgaria and Yugoslavia it was largely Austrian, and in Rumania it was under French influence. In the other two countries little is known of their postwar plans, but in Yugoslavia, Stampar, a former Rockefeller and Flexner fellow, is being helped by Tito to establish public health and medical education.

Czechoslovakia has liquidated the German medical school in Prague, although before the war it was better than the Czech school. The future seems grim, for many of the Czech teachers were killed.

Denmark has been said to be a perfect state medically.[4] It is small enough to control all of the factors which tended to ruin medical education in many of the larger countries. The public health program and the Serum and Carlsberg laboratories are the envy of many nations. However, outside contacts are now necessary to remove the putrefaction of the German invasion and occupation.

Iceland, a former Danish possession, or vice versa, has fared better, as the Rockefeller Foundation provided fellowships for several physicians from Iceland during the war.

Little information is available on the present condition of the medical schools of the Baltic states Estonia, Latvia and Lithuania. Before World War II several former Rockefeller fellows had helped raise medical standards.

Between World Wars I and II the medical school at Helsinki, Finland, was of the usual Scandinavian excellence, but no news of its present state is available.

Medical education in prewar France, largely because of the mobs of unselected students, was a disgrace to Louis, Laënnec and Pasteur. French medical education worsened during the German occupation, and now the French government is making an effort to improve standards. With the assistance of the Rockefeller Foundation fifty young French medical teachers are being maintained at several medical centers in this country.

Germany is a typical example of the European countries in which medical education has not kept pace with the advances in medicine, and therefore the situation is described in more detail.[5] There were at least four reasons for the low state of German medicine: 1. Too many students with little or no selection; of the 6,000 total university students at prewar Munich, 4,000 were medical! Part of this overcrowding was due to state support, which made rigid selection politically difficult, but more of it was due to the payment of the faculty on a "per student" basis. The larger the country's population, of course, the harder it is to keep the classes small. 2. Arrogant self satisfaction with the status quo prevented improvement. 3. Some of the faculty were replaced by worthless Nazi party members. 4. All of the teaching was by lectures without adequate laboratory and clinical work. In none of my tween-war visits to the German and Austrian pediatric departments did I see a medical student in the wards. Czerny, Finkelstein, Pirquet and the others would spend hours "walking the wards" with their assistants and visiting foreigners, but their only contact with students was a lecture or demonstration in the Hörsaal. They could see no reason why students should be taught bedside medicine. They had never heard of Osler's statement that the epitaph he wanted was "He brought medical students into the wards."

Furthermore, the segregation of research workers from the medical school into Kaiser Wilhelm institutes has reduced the productiveness of German medicine so that the medical journals for a generation have been of little scientific value. Except for the malarial treatment of dementia paralytica by Wagner-Jauregg, the insulin shock therapy of psychoses by Sakel, cellular metabolism by Warburg and thoracoplasty by Sauerbruch, nothing has been produced by Germans and Austrians since 1912 comparable to their pre-World War I medical contributions or to the current discoveries of American and British investigators, of which the Germans are contentedly ignorant. As an example of this attitude, Kuhn, a biochemist at the Kaiser Wilhelm Institute at Heidelberg, told us that he had an epoch making antiseptic. We asked if it was equal to penicillin. He promptly replied that it was better. He then had to admit that he had not compared them, but he said that anyway he knew that his drug was more powerful!

Fittingly, the war had the worst effects on medical education in Germany and Austria. As already mentioned, their pre-World War II educational standards

2. Flexner, A.: Medical Education in the United States and Canada, Bull. 4, New York Carnegie Foundation for Advancement of Teaching, 1910.

3. Davison, W. C.: The Future of Medical Education, to be published.

4. Parran, T.: Public Health Organization in Denmark, Pub. Health Rep. **42**: 1417-1445 (May 27) 1927.

5. Davison, W. C.: The German University Medical Schools During the Occupation, J. A. M. A. **129**: 1225 (Dec. 22) 1945. Berlin, R. S.: Schools for Democracy, Military Government Weekly Information Bull. 21, Dec. 15, 1945, pp. 10-22.

were low but now, except for the intact medical schools of Heidelberg, Marburg and Erlangen in the U. S. Zone of Occupation, Göttingen in the British area and Tübingen in the French zone, the physical facilities of most of the other twenty-four universities [6] are 50 to 80 per cent destroyed. At Göttingen the war actually improved medical education by destroying the large lecture room so that instead of admitting 800 first year students as usual, the class had to be limited to 150. However, the faculty of medicine did not agree with us that this limitation and consequent possibility of improving instruction more than offset their personal reduction in student fees. The other German medical schools have improvised usable accommodations for the hospital care of patients in their communities, but their facilities for teaching are inadequate.

Nevertheless all of the German and Austrian medical schools, which had been closed since the invasion in April 1945, petitioned their respective military governments for permission to open, largely, as they freely admitted, so that the faculty might receive salaries, and the students receive ration cards without working in the fields or labor battalions. The students seemed to have plenty of money to pay tuition because there are no consumer goods to be purchased with their savings from war wages or army pay. The immediate German problem, just as it is in this country, was to provide postgraduate instruction for the returning medical veterans. Starting at Heidelberg on August 15 and at Marburg on September 3, 337 and 160 graduates, respectively, were given typical German teaching with lectures from 8 a. m. to 5 p. m. with two hours for lunch. The members of the German faculty were deaf to our suggestion that these ex-medical officers should be taken into the wards and into the laboratories. "Why should they? It isn't done that way here" was the stock answer we received.

The next question was How should the German medical schools be opened for regular sessions without any changes, which is what the Germans wanted, or to try to elevate the standards, which is what the Americans and British were willing to do if the Germans could be persuaded that they needed improvement? The members of the faculties of the British medical schools with whom I talked in London and Oxford en route to Germany, the American teachers of my acquaintance and I would have liked to be invited by the German medical school faculties to help install a modern program, especially the sponsorship of each German medical school in the U. S. zone by some American medical school, which probably, if invited, would rotate some of its faculty members to the German school so that modern teaching methods could be established and maintained.[7] However, among the medical teachers with whom we talked last summer only one, F. Volhard of Frankfurt, wanted to make any changes; he appreciated from his visits to this country the inferiority of German physicians and urged that the medical schools have only postgraduate courses to rehabilitate their present product rather than to create more poorly trained doctors. The other Germans paid no attention to him but went ahead with plans to produce more practitioners *en masse*. G. von Bergmann of Berlin listened while we talked about American advances in medical education but showed no interest. F. Sauerbruch did not even keep his appointment with us. While waiting in his library we found three copies of a German translation of Dr. Abraham Flexner's Medical Education, A Comparative Study, presented to him by the Rockefeller Foundation, but the pages were uncut! We left a note asking him to study the book. Karl H. Bauer's library at Heidelberg did not contain a single American or British book, yet he is supposed to teach modern surgery. When we criticized the low quality of German instruction, one of the members of the academic faculty at Heidelberg, not realizing or caring that we understood German, commented "It is odd to hear qualitative criticism from the land of mass production and record breaking figures." The German medical schools should be a warning to us not to let our pride in American medical education reach the point at which we are completely satisfied and are unwilling to try to improve it.

In spite of our pious hopes of helping the Germans improve their archaic medical instruction—a patient cannot be treated unless he realizes that he is ill—there was no alternative but to allow the Germans to work out their own problems after screening the faculties for Nazis, and to permit the universities to open without reorganization of their curriculums except for the elimination of Nazi ideology and teachers, and dangerous research activities—Heidelberg and other places had been busily engaged in atomic bomb studies. The university authorities were urged not to admit students in excess of the crowded housing conditions; if the city had been bombed there were few habitable houses and if it was intact, like Heidelberg and Marburg, it was crammed with homeless refugees from other cities. This advice, which was necessary for public health as well as for obtaining a desirable curtailment in student enrolment, went unheeded, and the regular session at Heidelberg started in November 1945 with 1,050 medical students, even though the physiology and biochemistry facilities, for example, could accommodate only 140. The equipment at Marburg was even less adequate, but 1,250 medical and dental students were admitted. Marburg has only thirty-three medical teachers and one dental instructor! With nothing but lectures, they may not need any more.

Of the other universities in the U. S. Zone of Occupation, Erlangen, Frankfurt, Munich and Würzburg are making plans for reopening later this year. The German land authorities, for financial reasons, have decided not to open Giessen. As a matter of fact, no one knows how postwar Germany can support any universities. However, those in the other zones of occupation have reopened or hope to do so in the near future under provisions similar to those in the United States area.

Medicine in prewar Austria was as bad as in Germany and for the same reasons. No postwar reformation seems likely. Hungary, on the other hand, had fairly good medical schools with reasonably sized classes and laboratory and ward teaching. No news is available on their postwar plans, but the Soviets probably have some.

In Great Britain, the variety of medical standards is responsible for the good and bad graduates—the M.B.'s from the universities of Oxford, Cambridge, London and Manchester, for example, being a different product from

6. Frankfurt, Giessen, Munich and Würzburg (U. S. zone); Bonn, Düsseldorf, Hamburg, Kiel, Cologne and Münster (British zone); Freiburg and Strassburg (French zone); Berlin, Greifswald, Halle, Jena, Königsberg, Leipzig and Rostock (Russian); Breslau and Poznan (Polish). In Austria the Russians also control Vienna, the British Graz, and the French Innsbruck.

7. One of the reasons our diplomatic relations with other countries are so bad is our Anglo-Saxon spirit of reform, being missionaries and "do gooders," carrying the white man's burdens and always attempting to pull the mote out of other nations' eyes. It may be based on conceit and on a not too unconscious feeling of superiority. At any rate we are convinced that, if a political or medical program suits us, it must be imposed on every one.

the L. S. A.'s. The Goodenough Report,[8] the numerous prewar Rockefeller Foundation fellowships and the eighty-six wartime medical scholarships will eventually raise British medical education to a uniformly better level. During the war the medical schools carried on fairly well, in spite of the bombing, by decentralizing the teaching to Oxford, Cambridge and other "provincial" towns. By demonstrating that a successful clinical medical school does not require a huge city and that a closer affiliation with a university is mutually advantageous, the war may have been of some benefit to British medical education. Thanks to the Nuffield Foundation and the war, Oxford now has a complete medical school, one of Osler's dreams. Before World War II most of the Oxford students went to London after they had completed their preclinical studies at Oxford. However, the Oxford academic faculty is perturbed over this invasion and is discussing its elimination.[9]

Greece, because of politics and a poor faculty, has never had a good medical school.

Italy, the birthplace or rather the renaissance of modern medicine, has lost all claim to medical respectability. Before World War II, through the eighty-eight resident and the thirty to forty foreign fellowships supported by the Rockefeller Foundation, eleven of the twenty-three Italian medical schools were beginning to improve. However, Mussolini, a great increase in students, poor faculty salaries, the war and the deterioration of equipment killed this second renaissance.

In the Netherlands the isolation of the German occupation, the disappearance of 30 per cent of the faculty of medicine through death and liquidation, and the theft of books, instruments and machinery by the Boches, forced the closing of the schools at Leyden and Utrecht and the stagnation of those of Amsterdam and Groningen. Although prewar medical education in the Netherlands was equal to any other in the world, the Dutch are striving to reform and improve it. The government has invited four American medical teachers to spend three months in Holland as visiting lecturers. A delegation also is trying to rebuild the medical libraries.

The medical schools in Norway, though not physically damaged, have stagnated, as they have been cut off from the advances in medicine since 1940 and have not been able to graduate an adequate number of physicians. The temporary conquerors also stole considerable equipment. However, contrary to Germany, Norway believes in helping herself and is supporting forty dental students at Tufts, 320 science and medical students and 75 medical graduates in Sweden, Denmark and Switzerland. The American Scandinavian Foundation is trying to place others in this country. A special effort is being made to rebuild the public health and pediatric services.

Poland is in great medical need. Before World War II the medical schools of Warsaw and Cracow were nothing to be proud of, but now they are in ruins. During the war the Poles maintained a medical school in Edinburgh, and 30 to 40 were graduated last year. However, they do not seem to desire to return to Poland.

Prewar Spain, except for the neurohistologic laboratory of Cajal and Hortega in Madrid, had no medical education worthy of the name. Portugal is in a similar situation but without memories of Cajal and Hortega.

Sweden, before the war, had excellent medical schools at Stockholm, Lund and Uppsala,[10] but it now needs contact with the outside in order to resume its former standards.

Switzerland has maintained medical leadership in central Europe for many generations. While the medical schools in France, Germany, Austria and Italy deteriorated, Switzerland with good faculties, carefully selected small classes and practical teaching has been a model which all other nations should have followed.

The Union of Soviet Socialist Republics, like the United States of America, is an enigma for those who wish to generalize. The truth of the matter is that, like our own, some medical schools and parts of some others, e. g. the brain and physics institutes, are excellent, but the remainder suffer from too little mental and physical equipment. After all, the number of graduates cannot be greatly increased as it has from 1917 to the present without reducing some quality for the sake of quantity. The Soviets have invited thirty to forty American and British scientists to visit Russia, and a smaller reverse stream is starting.

SUMMARY

European medical education is not as good as most physicians formerly thought. It has been profoundly affected by the war both from the mental restrictions of the German occupation and from actual physical destruction in Great Britain, France, Italy and Germany. It is a great opportunity for us to be of help, but, as indicated, in connection with Germany our assistance must be invited. All of the European schools need supplies, and our army and navy medical surpluses now in Europe could not be better used than as gifts to the medical schols.

Several of the countries, e. g. Belgium, France and Norway, are sending their medical teachers to Great Britain and to this country for short or long periods of postgraduate training, and many others have expressed a desire not only to come here but also to remain. However, is this the best program for the rehabilitation of medical education in the countries that desire improvement? Scholarships and fellowships are splendid for the individuals holding them; and the number coming to this country is constantly increasing.[11] However, these people do not exert a very lasting influence on the university they visit or that to which they return, in spite of Colonel McCormick's fear that the Rhodes scholarships are part of a deep British plot to anglicize this country. Much more permanent effect would result if funds could be obtained to enable members of American faculties of medicine to spend three to six months at foreign schools to which they might be invited, as in the Netherlands plan, so that modern teaching methods could be established and maintained. A far better school of nursing was founded in Haiti by sending three teachers of nursing there than by bringing nursing students to this country. Oxford has profited by the Eastman visiting professors from this country, and the Flexner visiting lecturers from abroad have benefited Vanderbilt. It is said that even Harvard students like having visiting professors of medicine from other more provincial schools in this country—perhaps as a variation from their former Christian science.

8. The Goodenough Report: Medical Schools in Great Britain, Nature, London **154**: 322-326 (Sept. 9) 1944. Report of the Inter-Departmental Committee on Medical Schools, Great Britain Ministry of Health, Department of Health for Scotland, London, His Majesty's Stationery Office, 1944.

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PERINEAL PROSTATECTOMY UNDER CONTINUOUS CAUDAL ANESTHESIA

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Omaha

As long ago as 1931 one of us (Davis [1]) reported a consecutive perineal prostatectomy series totaling 229 under sacral block anesthesia without an anesthesia failure and had the temerity at that time to refer in the title to the "infallibility" of this method, properly employed, for this purpose. This consecutive series, now increased to a total well in excess of 1,000, has not yet been interrupted by failure, meaning that not in a single instance has it been necessary to employ supplemental inhalation anesthesia or narcosis of any kind except the routine preoperative hypodermic of ¼ grain (0.016 Gm.) of morphine sulfate given merely with the purpose of blunting the edge of apprehension. The term sacral block, as here employed, refers to injection of anesthetic solution through the sacral hiatus (caudal anesthesia), combined with injections through the sacral foramens, thus providing added insurance of success by approaching the same nerve roots from different directions (fig. 1). According to our routine technic, followed through the years, we have employed 40 cc. of procaine hydrochloride solution 1 per cent through the caudal needle and 10, 8 and 5 cc. into the first, second and third sacral foramens respectively on each side.

In view of this gratifying record, one might quite properly inquire why then attempt the continuous caudal method. There are several reasons, the first of which has to do with the skill and practice necessary for the location of the several sacral foramens, as compared with which the introduction of the needle into the caudal canal only is a comparatively simple procedure. This point is well illustrated by the published experiences of one of us,[1] whose early reports on perineal

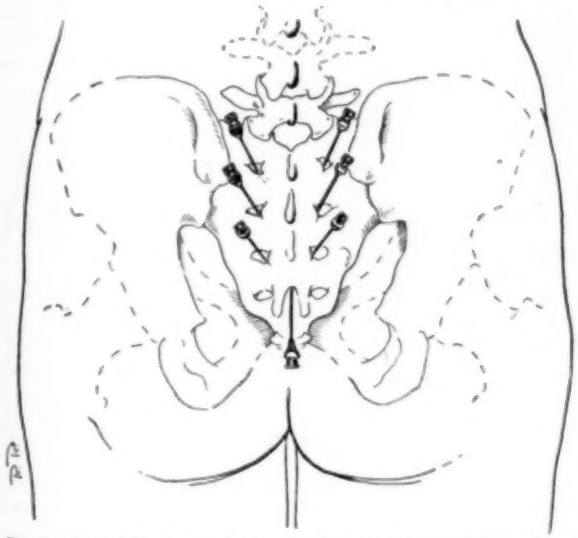

Fig. 1.—Sacral block anesthesia, showing combined injection of sacral hiatus and foramens

prostatectomy under sacral block anesthesia included no less than five anesthesia failures in the first twenty-five attempts, four in the second twenty-five, two in the third twenty-five, one in the fourth twenty-five and only one in the second hundred. The point which we make is that the dwindling percentage of failure is proof of the important role played by practice. All other factors having remained constant, this almost incredible improvement could have been due only to greater accuracy in the placing of the needles. From the point of view of the patient, the obvious advantage of the continuous caudal method lies in the difference between one needle and seven. There is also the time element, in that published figures [1] indicate an average period

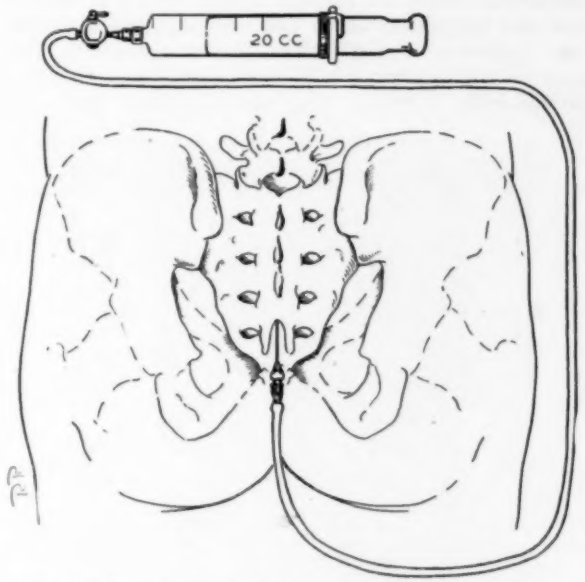

Fig. 2.—Apparatus required for continuous caudal anesthesia.

of eleven minutes necessary for the administration of sacral block anesthesia, with a maximum of thirty minutes and a minimum of four.

Our chief justification however for investigating the possibilities of continuous caudal anesthesia in the perineal field was that this technic seemed to offer a simple and safe method of anesthesia of unlimited duration, permitting the operator to substitute deliberateness for haste, and applicable not only in cases of difficult perineal prostatectomy but also in such procedures as perineal fistulectomy, repair of urethrorectal fistula and Young's complete radical excision of early prostate carcinoma.

The principle of continuous anesthesia by intermittent administration during the operative procedure was introduced in 1940 by Lemmon [2] as continuous spinal anesthesia. Edwards and Hingson [3] in 1942 applied the principle of intermittent administration of the anesthetic agent through a caudal needle in obstetric cases with satisfactory results. The technic that we have employed in perineal surgery is essentially similar to the technic of Edwards and Hingson.

TECHNIC

With the patient in the prone position, a 3 inch malleable steel spinal needle, number 19, as described by Lemmon, is introduced into the caudal canal after infiltration of the skin and subcutaneous tissues through a fine hypodermic needle. Whereas, after years of satisfaction with a stiff needle, we had anticipated difficulty with the malleable needle, the contrary proved to be true, because of the tendency of the malleable needle to adapt itself to the normal curve of the sacral canal. Full advantage may be taken of the malleable

From the urologic departments of the Bishop Clarkson Memorial Hospital and the Hospital of the University of Nebraska College of Medicine.

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quality of the needle by combining the forward thrust with a slow twisting motion, thus causing the bevel to act as a sled runner and minimizing interference by the floor or the roof of the canal. Following attempted aspiration, to exclude the possibility of venipuncture, and the exceedingly remote possibility of spinal tapping, procaine hydrochloride solution 1 per cent, in the amount of 80 cc. is slowly injected. This amount was arbitrarily decided on because it was found to be adequate and harmless. It is not unlikely that a smaller initial injection would suffice. The patient is then placed on the operating table in the exaggerated lithotomy position. During this manipulation not more

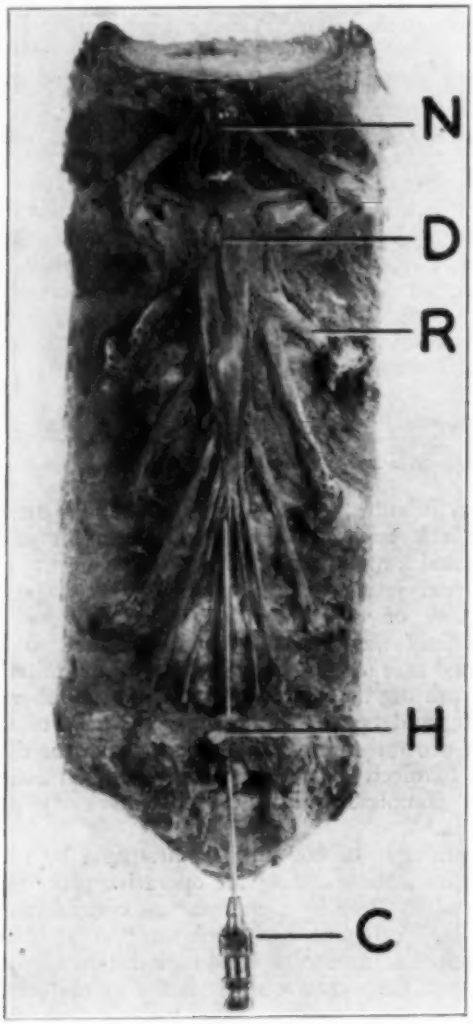

Fig. 3.—Anatomic dissection with entire dorsal surface of sacrum removed, exposing dural sac and nerve roots as they traverse the bony sacral canal: *D*, dural sac, terminating at level of second sacral segment; *N*, nerve fibers within dural sac (cauda equina); *R*, first sacral nerve root; *H*, sacral hiatus; *C*, caudal needle. The small black dots visible around the nerve roots represent cross sections of vessels traversing the sacral foramens. These are not infrequently tapped during the administration of sacral block anesthesia, necessitating replacing of the needles.

than ordinary care is necessary to avoid disturbing the caudal needle, which is then connected to a 20 cc. Luer-lok syringe by means of a 3 foot length of fine rubber tubing (fig. 2). Although the lapse of time during placing and draping of the patient is ordinarily sufficient for the development of anesthesia, the infallible criterion as to the timing of the incision is relaxation of the sphincter ani. Throughout the operative procedure, procaine hydrochloride solution 1 per cent in 10 cc. amounts is then injected at fifteen minute intervals. This formula also was arbitrarily determined on and may be modified in the individual case as necessary and as determined by the judgment of the anesthetist. In not a few instances the initial 80 cc. injection was found to be adequate for the entire procedure. Figure 3, being a photograph of an anatomic dissection, shows precisely the relationship of the dural sac, nerve roots and caudal needle within the sacral canal.

RESULTS

This method has given uniformly satisfactory results in 36 consecutive cases without mishap or unfavorable sequelae of any kind. In no instance has supplementary inhalation anesthesia or any supporting measure been necessary. Any complaint, or even any comment at all on the part of the patient during the operation, has been the exception and has been with respect to discomfort incident to the position on the table and wholly unrelated to the operative manipulation. There was no instance of a serious drop in blood pressure. Anesthesia was maintained in this series in a range from fifty to one hundred and fifty minutes with total dosages varying from 80 to 150 cc. of 1 per cent procaine hydrochloride. Drug reactions, characterized by a drop in blood pressure, slow pulse, pallor, perspiration and sometimes a transient loss of consciousness, have never been of serious consequence and may be reduced to minimum frequency by extreme care in avoiding venipuncture. Such reactions may be controlled by the intravenous administration of 50 mg. of ephedrine.

The continuous caudal method has as its obvious advantages its relative simplicity from the point of view of both surgeon and patient as well as the elimination of the need for haste in any unusually prolonged perineal procedure, whether prostatectomy or fistulectomy. In addition to the easily avoided hazard of intravenous injection and the negligible hazard of intradural injection, the only disadvantage which occurs to us is that success is wholly dependent on the accurate placing of one needle only, whereas with the complete sacral block each nerve trunk is bathed in anesthetic solution injected from two or more directions. Our consecutive series of 36 patients without failure, however, would indicate that with reasonable skill the danger of failure properly to introduce the needle is negligible. In spite of the recognized tremendous variation in the bony structure of sacra, so well depicted by multiple illustrations in Lull and Hingson's [4] recent treatise on this subject, the skilled operator almost never fails to introduce the needle into the canal. These results, in seeming contradiction of the opinion formerly "widely prevalent that sacral block anesthesia has a certain inevitable proportion of failure," [1] averaging about 15 per cent in different hands, may be explained by the larger quantities of solution now employed. We know of no factors determining success or failure, other than proper placing of the needle and the quantity of solution, these being the only variables.

CONCLUSIONS

Uniformly satisfactory results, with complete anesthesia and without toxic manifestations, in a series totaling 36 consecutive cases, justify the conclusion that continuous caudal anesthesia in perineal prostatectomy is feasible and might well supplant other methods. The continuous caudal method is applicable in other perineal operations in addition to prostatectomy.

1436 Medical Arts Building.

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SELECTION OF HYPERTENSIVE PATIENTS FOR SYMPATHECTOMY

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The demonstration that surgical sympathectomy may favorably influence the course of essential hypertension in man has given emphasis to the role of the autonomic nervous system in the pathogenesis of this disease. Indeed there is much to indicate that (1) neurogenic vasoconstriction is of prime importance in human hypertension and that (2) renal ischemia is a secondary rather than a fundamental phenomenon in its mediation.

Obviously, sympathectomy can be successful only in those instances in which vasospasm is due wholly or in large part to neurogenic influences. As there has been no method by which autonomic activity could be accurately quantified in man, selection of patients for surgery has proved difficult. A test that could determine the presence and degree of participation of a neurogenic element would be valuable. The sodium amytal, sodium nitrite and cold pressor tests, although still widely used, have given ample demonstration of their inability to fulfil this need.[1] High spinal anesthesia[2] appears to yield some information regarding sympathetic participation in hyperpiesia but in our experience introduces factors greatly interfering with proper interpretation of the results. Thus, the loss of muscle tone and complete motor paralysis observed in the lower part of the body in spinal anesthesia may, of themselves, materially affect the height of the blood pressure through the medium of venous stasis, diminished venous return to the heart and fall in cardiac output. In this connection the fundamental role of tonic tissue pressure in determining venous return needs no further emphasis. The alteration in respiration, which becomes entirely diaphragmatic under high spinal anesthesia, further diminishes the return flow to the thorax as a result of a less efficient respiratory "pumping" action. Consequently the hemodynamic response to this procedure does not seem comparable to that following surgical sympathectomy.

In a previous report we[3] described the use of continuous caudal anesthesia as a means of selecting hypertensive patients for surgery. The results in a small series of cases raised the hope that this procedure might eliminate guesswork in making such selection. The following appear to be among the advantages of continuous caudal anesthesia over high spinal anesthesia as a test of sympathetic activity:

1. Muscle tone and motor power in the lower extremities are little affected.
2. Respiration is essentially unchanged.

In view of 1 and 2 a closer approximation to the status after surgical sympathectomy is established.

3. The height of anesthesia is easily and safely raised to the desired level by repeated small injections.
4. The height of anesthesia is readily controlled and may be maintained without danger for hours, permitting performance of other tests at lower blood pressure levels.
5. By gradual and progressive block of sympathetic nerve segments from below upward, correlated with blood pressure readings, a clear concept may be obtained not only with regard to the degree of neurogenic influence but also with respect to the extent of surgery indicated in the given case.
6. Tilting of the patient with feet elevated and head low, in order to minimize venous stasis, may be safely undertaken without danger of depressing medullary centers. In caudal anesthesia the anesthetic agent is extradural and cannot rise above the foramen magnum around which the dura is attached.
7. Nausea, vomiting and toxic symptoms are rare. In 60 cases of essential hypertension in which this test was given we have not encountered a single instance of shock or other serious reaction.
8. The patient appears more comfortable and less apprehensive than when under spinal anesthesia. He can be transported easily and does not require observation after the procedure.
9. The patient may be up and around within a few hours after the test and "spinal headaches" are not subsequently encountered.

TECHNIC OF THE TEST

The patient is placed in a quiet room, and blood pressure readings are taken every fifteen minutes for a period of one hour. Continuous caudal anesthesia[4] employing the technic of high caudal block[5] was used in most instances. After insertion of the needle into the sacral canal a trial dose of 8 cc. of metycaine 1.5 per cent is injected. With no loss of sensation to pin prick or loss of motor power in the lower extremities in ten minutes, it can be safely assumed that the subarachnoid space has not been entered. Thirty cc. of the 1.5 per cent solution is then slowly injected. A progressive loss of painful sensations as caused by pin prick in regions supplied by the coccygeal, hemorrhoidal, perineal, pudendal, ilioinguinal and iliohypogastric nerves ensues. Vasodilatation with flushing of the soles of the feet, cessation of sweating and increase in skin temperature of the feet follows within five to fifteen minutes after injection. The patient is then placed comfortably on his back and 30 cc. of the anesthetic agent is again injected within five to ten minutes after the previous injection. This dosage often suffices to cause a gradual rise in the level of skin anesthesia to the sixth thoracic segment within twenty to thirty minutes (determined by pin prick). In many cases, however, one or two additional injections of 30 to 50 cc. at twenty to thirty minute intervals are required to establish the desired level of anesthesia. Throughout the procedure the latter is determined and recorded every five to ten minutes together with associated blood pressure readings. Subsequent injections of 20 to 30 cc. of metycaine may be employed at variable intervals if it is desired to perform other tests at the lower blood pressure levels. The patient may be tilted at any time with the feet elevated in order to determine the influence of venous stasis on blood pressure.

In a few cases it was found impracticable to raise the level of anesthesia to effective heights by the caudal method. For these we have used continuous peridural anesthesia.[6] Fundamentally this method is the same

Dr. Homer L. Skinner performed the surgical operations.
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From the Cardiovascular Research Division and Surgical Service, U. S. Marine Hospital, Staten Island, N. Y.

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as caudal anesthesia, the drug solution causing its effects in the same location and manner. The needle is inserted in the upper lumbar region, however, and by this technic diffusion to the thoracic nerves is more readily obtained.

RESULTS OF TEST

Lowering of the blood pressure to normal levels (140/90 or less) occurred in 32 of 60 hypertensive patients when the level of anesthesia was at the sixth thoracic segment or below. In 8 of these 32 patients normal levels were attained with anesthesia only as high as the tenth thoracic segment. In 18 patients of the entire series there was a moderate fall in blood pressure to levels above 140/90 but considerably below the original resting pressures. Elevation of anesthesia to the fourth thoracic segment brought the blood pressure down to normal levels in 10 of these 18 subjects. Consequently restoration to normal blood pressure was accomplished in 42 of 60 patients by levels of anesthesia varying from the tenth to the fourth thoracic segments. Of the entire series 10 patients showed slight or no response to the test. It is conceivable, therefore, that the reaction of the blood pressure to continuous caudal anesthesia not only may establish the existence of a neurogenic element but may actually suggest the extent of sympathetic denervation necessary to achieve a satisfactory result.

To date we have followed the course of 12 patients who were operated on for hypertensive disease. In all cases the procedure advocated by Smithwick [7] was performed. Ten of the 12 patients showed a favorable response to the caudal test and 9 of these responded to surgery in similar manner. The tenth (case 9) has continued to show hypertension in the recumbent position but only mild elevation of the blood pressure on assuming the erect posture. Two patients showing poor response to the caudal test were operated on and in both instances surgery failed to improve their status. From the accompanying table it can be seen that the sodium amytal, sodium nitrite and pentothal sodium tests were unreliable in forecasting the outcome of surgery.

Case 8 is of special interest because only the caudal test suggested possible benefit from sympathectomy. Operation was performed in two stages but the lumbar sympathetic ganglions on one side were not found. The blood pressure remained elevated and persisted around 174/140 in the recumbent position, the original level having been 226/160. The caudal test was repeated and the blood pressure was again found to be considerably influenced by it. The patient was operated on again and this time the lumbar sympathetic ganglions were found and resected. The blood pressure subsequently fell to 150/110 in the recumbent position and has persisted at this level.

Case 9 failed to respond to surgery as favorably as was predicted by caudal anesthesia. The blood pressure in the recumbent position was 220/140 but fell to 156/108 on standing. The caudal test was repeated in this case and it was found that the blood pressure remained relatively unchanged until high levels of anesthesia were reached (eighth thoracic to fourth thoracic). This was in distinct contrast with the findings in the preoperative test. It seemed, therefore, that while denervation appeared complete at the lower levels a more extensive sympathectomy might have improved the results. The difference between the preoperative caudal test and the result following sympathectomy may be explained by the fact that in the latter the thoracic ganglions only as high as the ninth segment were resected, while in the caudal test functional denervation as high as the sixth thoracic segment was achieved and used as a basis for prognostication. In an appreciable number of cases under caudal anesthesia we have noted a definite decrease in blood pressure with only slight increase in the extent of denervation.

The large variation in the response of hypertensive patients to continuous caudal anesthesia may conceivably form the basis for decision as to the extent of surgery indicated in a given case. Thus the patient whose blood pressure is reduced to normal with anesthesia only as high as the tenth thoracic segment may merely require supradiaphragmatic resection of the splanchnic nerves (Peet [8]) or infradiaphragmatic resection (Craig and Adson [9]) or one of the other less extensive procedures to achieve a satisfactory result. Patients requiring levels of anesthesia as high as

Results of Studies

Case	Age	Blood Pressure * Resting Level	Sodium Amytal	Sodium Nitrite	Pentothal Sodium	Caudal Test	Post-operative	Comment
1	44	200/130	.....	140/100	190/125	140/ 90	136/ 90	Grade 3 eyegrounds; normal cardiac and renal functions
2	42	230/120	.....	190/110	170/120	140/100	150/ 94	Grade 2 eyegrounds; normal cardiac and renal functions
3	21	200/140	.....	170/118	130/102	100/128	180/130	Grade 4 eyegrounds; early congestive heart failure; poor kidney function
4	36	180/130	.....	100/114	162/130	90/ 70	96/ 62	Grade 1 eyegrounds; normal cardiac and renal functions
5	48	180/110	130/ 90	.....	.....	176/110	184/108	Grade 1 eyegrounds; normal cardiac and renal functions
6	45	210/130	.....	.....	180/124	136/ 86	140/ 92	Grade 2 eyegrounds; normal cardiac and renal functions
7	47	220/140	164/100	180/126	.....	120/ 84	126/ 90	Grade 2 eyegrounds; normal cardiac and renal functions
8	41	226/160	190/142	178/130	.....	140/100	150/110	* Grade 3 eyegrounds; normal cardiac function; decreased renal function
9	39	220/148	180/124	186/130	.....	150/ 95	220/140	Grade 1 eyegrounds; normal cardiac and renal functions
10	50	240/140	164/110	200/118	.....	152/100	146/ 98	Grade 2 eyegrounds; normal cardiac and renal functions
11	54	160/112	140/ 96	130/ 88	.....	120/ 80	124/ 88	Grade 1 eyegrounds; normal cardiac and renal functions
12	47	200/136	142/ 90	150/124	.....	130/ 90	142/ 96	Grade 2 eyegrounds; normal cardiac and renal functions

* All pressures were measured with the patient lying down.

7. Smithwick, R. H.: A Technic for Splanchnic Resection for Hypertension: Preliminary Report, Surgery **7**: 1-8, 1940.

8. Peet, M. M.: Splanchnic Section for Hypertension: Preliminary Report, Univ. Hosp. Bull., Ann Arbor **1**: 17-18, 1935.

9. Craig, W. M., and Adson, A. W.: Hypertension and Subdiaphragmatic Sympathetic Denervation, S. Clin. North America **19**: 969-980, 1939.

the sixth thoracic segment for favorable response of the blood pressure may be the candidates requiring the Smithwick type of resection.[7] Finally we have observed a group of patients who, under caudal anesthesia, show progressive but slow decline in blood pressure so that satisfactory readings are not obtained until the level of skin anesthesia reaches the fourth or even the second thoracic segment. It is possible that these patients can be aided only by total sympathectomy (Grimson [10]). The differences in response to caudal anesthesia may well explain the lack of uniformity in the reported results of various surgical technics.

The use of continuous caudal anesthesia demonstrates that a safe and reliable means exists of producing functional block of the sympathetic nervous system. The method offers a challenge to research for the discovery of a sympatholytic drug capable of prolonged effect, which may render surgery unnecessary.

SUMMARY AND CONCLUSIONS

Continuous caudal anesthesia reduced the blood pressure to normal in 42 of 60 hypertensive patients given this test. Eight patients showed a moderate fall of blood pressure but remained hypertensive even at relatively high levels of anesthesia. Ten patients showed slight or no response to the test.

Observations of the response of the blood pressure to continuous caudal anesthesia were used to predict the outcome of surgical sympathectomy in 12 hypertensive patients. The results were accurately forecast in 11 of the 12 instances. Other tests were found unreliable when employed for this purpose.

Continuous caudal anesthesia may be of value in the selection of hypertensive patients for sympathectomy and in dictating the extent of surgery necessary for a successful result in individual cases.

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THE CLINICAL USE OF ORAL BASAL TEMPERATURES

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Tompkins [1] in 1944 called attention to the value of basal temperatures for the determination of the time of ovulation. He reviewed the literature briefly and emphasized the fact that little clinical use has been made of this important physiologic phenomenon in the interpretation of the events in the normal ovarian cycle. His most important contribution was the designing of a practical temperature graph for the use of the patient and providing explicit directions so that the graph could be filled out readily and accurately. The introduction of this graph has increased the interest of the profession in this practical method of studying ovarian changes.

During the past two years we [2] have collected basal temperature graphs in over 500 patients. This study has been correlated with a study of vaginal smears, endometrial biopsies and operative material whenever it was available. Many interesting observations have been made and, like Tompkins, I have been impressed with the simplicity of a diagnostic method which can yield a tremendous amount of information. This short report has a twofold purpose: (1) to point out again the value of basal temperatures in the clinical interpretation of ovarian physiology and (2) to urge the substitution of oral temperatures in place of the objectionable rectal and vaginal temperatures in use at the present time.

Body temperature variations in healthy persons, young and old, have been known for many years. It is a sensitive barometer of physical as well as mental activity, metabolic activity and other physiologic functions. Muscular work, food taking, mental excitement and extraneous stimuli all tend to raise the level of temperature of the healthy person. Typical curves have been set up demonstrating the fluctuations in body temperature during the twenty-four hour period under varying environmental conditions. They follow a diurnal pattern because days are devoted to activity and nights to rest. Kleitman and his co-workers [3] spent a week in a subterranean cave devoid of outdoor light and proved that day and night could be eliminated as factors influencing body temperature, for the curve could be altered by changing the period of rest and activity.

In the healthy male there is no variation in the daily pattern other than that induced by the foregoing factors. In the female ovarian activity alters this daily basic curve. Follicle rupture and corpus luteum development raise the level of the basal temperatures during the latter half of the cycle. The relationship of ovarian activity and body temperature has been demonstrated by a number of authors. Rubenstein [4] in 1939 initiated an extensive study to correlate these physiologic phenomena.

Kleitman [5] has pointed out that in his extensive studies of body temperature the pattern of the curve obtained by oral recordings was similar to that obtained by rectal recordings. Oral temperatures are about 1 degree Fahrenheit lower than rectal temperatures. In his experience the morning basal temperature obtained orally is more accurate than recordings at any other time of the day, for no liquids or food have been consumed for many hours. Furthermore, a curve constructed from a single daily recording provides reliable information for clinical interpretation. Additional temperature readings may be of some help in noting the temperature drop preceding the ovulatory rise.

I have replaced my own graph with the Tompkins chart since its introduction. Oral temperatures are recorded rather than rectal temperatures or vaginal temperatures as suggested by some investigators. Although oral temperatures are somewhat lower than rectal temperatures, the basic pattern of the curve remains the same. I have found that women do not like the idea of taking rectal temperatures because it is inconvenient and unesthetic. It is simple to place the thermometer in one's mouth immediately on awakening. This simple procedure involves little or no activity.

The thermometers on the market are designed in such a way that they are difficult to read. Recently a thermometer has been introduced by the Taylor Instrument Company in which the mercury column is visible readily. We have spent some time with each patient instructing her in reading the thermometer and in explaining to her the purpose of the basal temperatures and their proper

From the Department of Obstetrics and Gynecology, the University of Chicago, and the Chicago Lying-In Hospital.

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recording. She is urged to place the thermometer in her mouth immediately on awakening before she resorts to any activity. It is helpful to have the patient bring the graph at the end of a month so that it can be inspected to make certain that it is being kept properly.

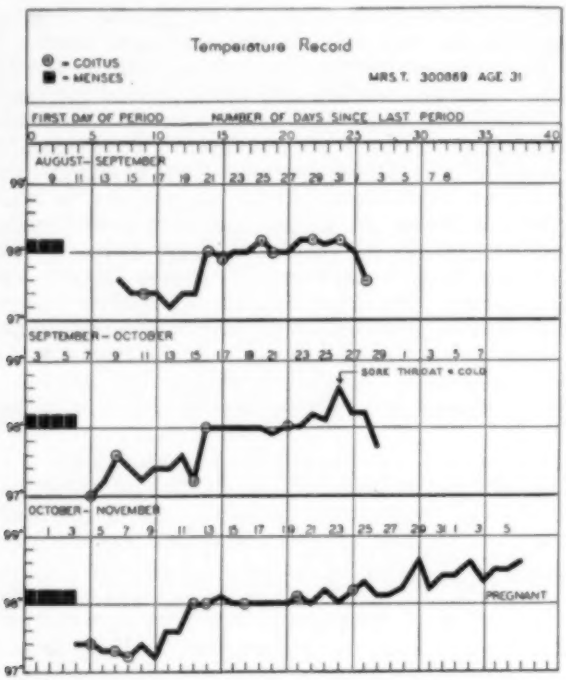

Chart 1.—This patient menstruates every twenty-six to twenty-nine days for three or four days. The drop in temperature from the preovulatory basal level occurred on days eleven, fifteen and ten. When coitus occurred at the time of the drop in September, no pregnancy resulted. However, when it took place at the peak of the rise, conception followed. Note the drop in temperature thirty-six hours prior to the onset of bleeding.

The more careful the record is maintained, the more valuable are the data to the physician.

The patient is asked to indicate on the graph the menstrual days, any unusual occurrence, illness, coitus and special medication (endocrine patients). Basal temperatures are significant if the daily routine of the patient does not vary considerably. A patient who arises at widely varying hours is likely to have an irregular basal curve which may provide little information. A single reading on arising in the morning provides all the information needed.

Basal temperatures are reliable indexes of ovarian activity in at least three out of four women. In the remaining one the curve is so atypical with irregular readings at intervals that no accurate interpretation of physiologic changes can be made. In the group of women with typical curves an accurate correlation between basal temperatures and physiologic changes can be made.

THE TYPICAL BASAL CURVES

The temperature drops twenty-four to thirty-six hours before the onset of bleeding, reaching a low level during the first day or two after the onset of the menses. This low level continues during the entire menstrual phase and to the midinterval, when ovulation occurs usually in the woman who has a twenty-seven to thirty-one day cycle. Typically there is a further sharp drop in the temperature from the base line just prior to the ovulatory rise, although this drop may not be apparent. The temperature rises abruptly during the next twenty-four to thirty-six hours, reaching a plateau, where it remains until twenty-four to forty-eight hours before the onset of bleeding in the following period. The rise is a clearcut phenomenon and the temperature curve after the rise is in sharp contrast to that preceding it (chart 1).

It has been assumed that the drop prior to the rise signifies ovulation and that this point would represent the most fertile period in the cycle. The majority of the pregnancies followed coitus during the period of temperature rise following this drop and immediately after it has reached its upper plateau. Clinically, it is difficult to interpret the preovulatory drop in temperature but it is relatively easy to note the ovulatory rise. It is my impression that the rise is brought about by ovulation and that the elevated basal temperatures are maintained by the corpus luteum activity. Persistence of the elevated temperature during pregnancy would add weight to this interpretation. I am attempting to reproduce normal basal temperature curves in young castrates by endocrine substitution. These experiments may add some information.

When pregnancy occurs, the basal temperature remains at the postovulatory level during the first few months of the gestation (charts 1 and 2). At this time a drop occurs in most patients, but it does not return to the preovulatory level until the end of gestation. In the postpartum period there is little variation in temperature until ovulation has been resumed. Basal temperature curves indicate that the first bleeding period is rarely ovulatory in character and that the second menstrual period is associated with ovulation in approximately half of the patients (chart 3). This confirms the observations which my associates and I made previously in a group of women in whom endometrial

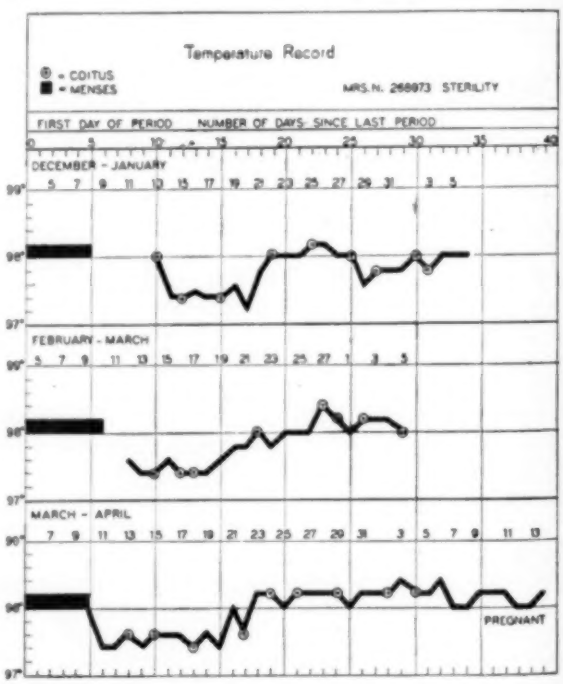

Chart 2.—This patient menstruates every thirty to thirty-four days for five or six days. Conception could have occurred when the temperature was rising or within twenty-four hours after it had reached a peak. In this graph, as well as in chart 1, note the persistence of the postovulatory level after conception.

biopsies were obtained at every bleeding period for as long as a year. These studies revealed this typical pattern for the resumption of ovulation following parturition.

STERILITY STUDIES

A basal temperature curve should be a part of every sterility study. It is the simplest device for ascertaining ovarian activity and dating ovulation. Other methods to determine whether a cycle is ovulatory are more

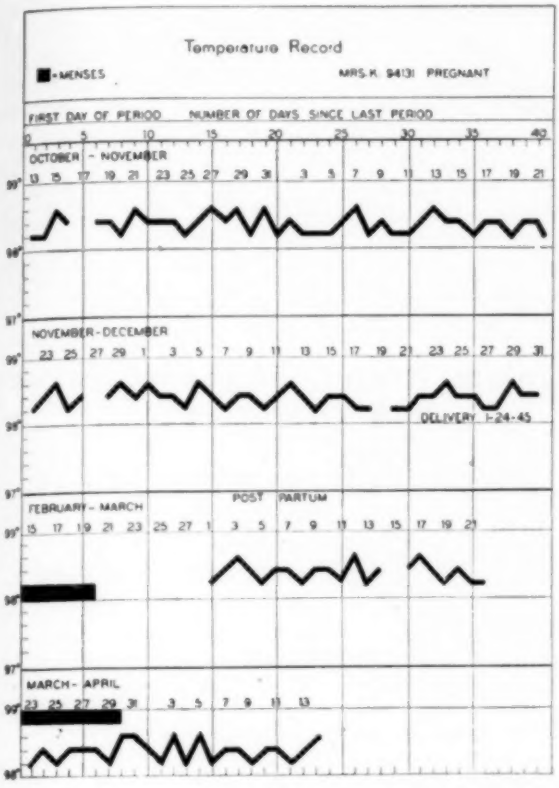

Chart 3.—A temperature record during the last three months of a normal gestation and during the first two menstrual periods following delivery. The patient delivered on Jan. 24, 1945. Her first bleeding period occurred from February 15 to 20 and it was anovulatory in character, as revealed by the temperature curve and an endometrial biopsy at the time of bleeding. The second menses lasted eight days from March 23 to 30. It was likewise anovulatory. The third period occurred thirty days later and was preceded by a typical ovulatory temperature curve. Biopsy of the endometrium at the onset of bleeding revealed a progestational phase.

difficult and do not provide as much information. Endometrial biopsies are usually taken at the onset of the menses and provide information concerning the preceding cycle. They are time consuming and cannot be repeated indefinitely. Pregnandiol determinations provide indirect information concerning ovarian activity, but they are laborious procedures. Basal temperatures indicate ovulatory cycles and the time of ovulation within a twenty-four to forty-eight hour period.

Patients can be instructed to have coitus as the temperature drops preceding the ovulatory rise, as it rises, and when it has first reached its postovulatory peak. This has been possible in at least 75 per cent of our patients. Assuming that the life of the ovum is very short, certainly less than twenty-four hours, and the spermatozoa retain their fertilizing power for about twenty-four to thirty-six hours, it is possible to provide spermatozoa at the proper time in most instances. This must necessarily increase the likelihood of conception and this fact has been borne out in our experience. In some instances we have learned from the record that coitus has taken place at too frequent intervals, thereby decreasing the fertility of the male (chart 4). On several occasions conception followed promptly the restriction of intercourse to that period when ovulation was indicated by the rise in basal temperature. Excessive sexual activity is of particular importance in couples of low fertility as a result of a low sperm count in the male or some other factor. Thus, our basal temperature records have provided us with much pertinent information concerning the sexual life of our sterile couples.

DIAGNOSIS OF EARLY PREGNANCY

The persistence of the postovulatory elevated temperature in the event of conception constitutes the most accurate early data concerning a pregnancy. During the first week of the missed menstrual period the failure of the temperature to drop provides reliable information concerning a possible pregnancy. This information may be of value in patients who have had abortions early in pregnancy so that therapy may be instituted when it is most likely to be effective and a regimen to safeguard the pregnancy instituted. The patient in whom the periods vary in length considerably will provide less information by the temperature curves.

AS AN AID IN PREVENTING PREGNANCY

A basal temperature record can be used to determine the fertile period in women who do not wish to use contraceptive aids. It is a more accurate method of determining ovulation than arbitrarily dating it fourteen days from the next expected menstrual period. The woman is asked to refrain from coitus from the preovulatory drop in temperature until thirty-six to forty-eight hours after the ovulatory rise has reached a plateau. In the woman with a typical curve the fertile period can be narrowed down to three days or less. The woman who has an atypical curve can refrain from coitus from day nine or ten until forty-eight hours

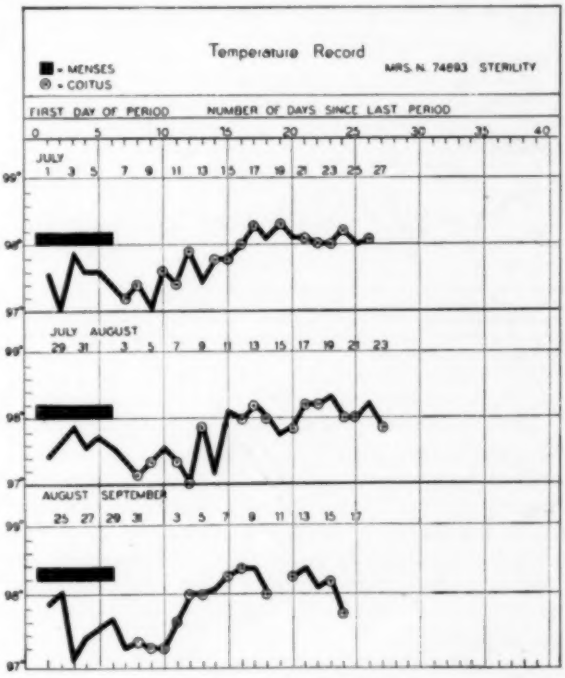

Chart 4.—A sterility patient who had typical temperature curves indicating regular ovulatory cycles every twenty-five to twenty-seven days. The husband had a low spermatozoa count but was otherwise normal. The frequency of coitus was noted in the record and was due to the great desire of the couple for a baby. When coitus was restricted to the period of ovulatory rise in temperature the patient conceived the following month.

after the rise has reached the postovulatory plateau. This will increase the length of the period of sexual abstinence but it will decrease the hazard of a possible

pregnancy. A group of women have followed these simple instructions during the past year and have had no difficulty thus far.

IN THE MENOPAUSAL PERIOD

Many women are concerned about the possibility of a pregnancy in the menopausal period. Menstruation becomes irregular and the normal pattern disappears. More and more of these menstrual cycles are anovulatory in character. Eventually sporadic ovulations likewise disappear.

A group of women have followed their basal temperatures during the period of the climacteric. It soon became apparent to them that fewer and fewer periods were associated with ovulation. Obviously there is no danger of conception in the absence of ovulation. When bleeding ceases entirely the curve assumes the typical diurnal pattern seen in the male, for ovarian activity is at a low ebb.

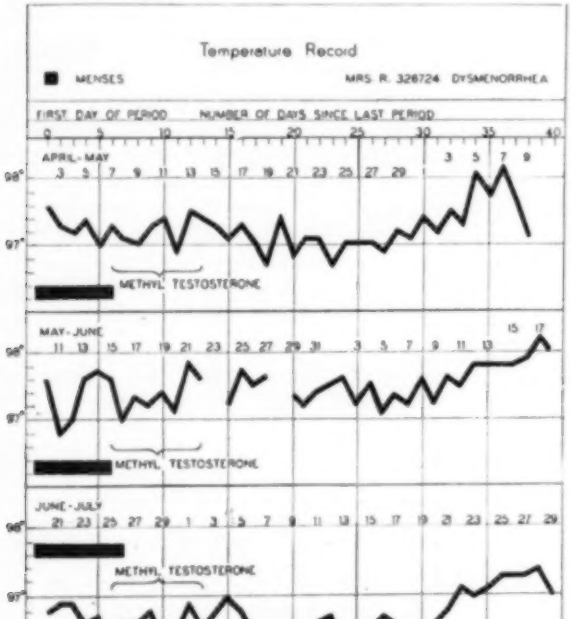

Chart 5.—The effect of methyl testosterone administered orally can be seen in this temperature record. The normal menstrual pattern of twenty-seven to thirty-one days has been disturbed. Ovulation has been suppressed and the cycles have been lengthened. The effects of various endocrine preparations can be studied more intelligently by the use of basal temperatures.

IN THE PATIENT WITH AN ENDOCRINE PROBLEM

All gynecologic endocrine studies should include a record of basal temperatures. The frequency of the menstrual periods, their length and character can be noted in the graph. Ovulatory cycles can be differentiated from anovulatory ones. Such information should not replace other data obtained by a careful endocrine study, but it will help in the diagnosis and management of the patient.

The effect of medication on ovarian activity and menstruation can be followed. The following examples from our studies can be cited: Patients with complete ovarian failure have a typical diurnal temperature pattern seen in the male. The various gonadotropins have not influenced the character of the curve. Chart 5 is the record of a patient with severe dysmenorrhea treated by methyl testosterone administered orally. It will be noted that the preparation altered the regular twenty-seven to thirty-one day ovulatory cycles and induced irregular cycles lasting much longer. Ovulation is suppressed and the postovulatory rise did not occur. The relief of the dysmenorrhea in this instance was the result of an inhibition of ovulation, as is often the case. The cessation of medication resulted in a prompt return of normal ovarian function and a typical ovulatory temperature curve.

CONCLUSIONS

An accurate graphic record of morning basal temperatures taken orally will provide pertinent data concerning ovarian activity and ovulation. Such a record should become part of all gynecologic endocrine studies, sterility investigations and in any other case in which information concerning ovarian activity is important. Temperature curves can be used as contraceptive aids. More widespread clinical use of the physiologic phenomenon of body temperature changes should be made by physicians.

Clinical Notes, Suggestions and New Instruments

MYCOTIC MENINGITIS DUE TO CANDIDA

BÉLA HALPERT, M.D.
and
HARRY WILKINS, M.D.
Oklahoma City

The clinical history and necropsy findings are presented of a patient who died with central nervous system involvement of an obscure nature. At necropsy the appearance of the lesion suggested tuberculous meningitis. However, microscopic examination revealed the presence of, and the reaction to, a fungus of the genus Candida, probably Candida albicans. The case is presented because Candida is a rare cause of meningitis. Smith and Sano [1] and Miale [2] have reported instances of meningeal involvement by Candida albicans. This however is the first case in which localization occurred in the central nervous system only.

REPORT OF CASE

L. J., a Negro aged 25, was first seen at the University Hospitals on Sept. 1, 1941, when he complained of headache of eleven months' duration. The pain was bitemporal with the sensation of the eyes "drawing." Four months prior to admission his neck became painful and diplopia developed. Two weeks before admission these symptoms became more severe, his vision tended to decrease and tinnitus occurred. On admission he was stuporous but could easily be aroused. Gross paresis was absent, nuchal rigidity was present and Kernig's sign was positive bilaterally. The pupils were unequal, with the left larger than the right. There was paralysis of the left abducens nerve. Lateral nystagmus was noted when the eyes turned to the left. Papilledema was evident bilaterally. Visual fields were of normal outline. Cutaneous and deep sensations were undisturbed and the motor pathways were intact. The tendon reflexes were decreased to absent, and Babinski's sign was negative. There was slight incoordination in the finger to nose test on the left. The pulse rate was 76 and the blood pressure 108/68. Other physical findings were essentially negative. Roentgenographic examination of the skull suggested an erosion of the tip of the left petrous bone but no other changes. The Kahn test of the blood was negative. The presence of an intracranial neoplasm was suspected, so spinal puncture was considered to be contraindicated and ventriculograms were made on October 8. These disclosed a moderate internal hydrocephalus with air passing freely into the dilated fourth ventricle. The presence of an intracranial neo-

From the Departments of Pathology and Surgery, University of Oklahoma School of Medicine.

1. Smith, Lawrence W., and Sano, Machteld E.: Moniliasis with Meningeal Involvement, J. Infect. Dis. **53**: 187-196 (Sept.-Oct.) 1933.
2. Miale, J. B.: Candida Albicans Infection Confused with Tuberculosis, Arch. Path. **35**: 427-437 (March) 1943.

plasm was excluded. The ventricular fluid contained 66 cells per cubic millimeter, all lymphocytes. The total protein content was 50 mg. per hundred cubic centimeters. The Kolmer-Wassermann test was negative. The colloidal gold curve was 2222110000. Three weeks later, October 30, the cerebrospinal fluid contained 1,215 white blood cells with 60 per cent neutrophils and 40 per cent lymphocytes. The protein content was 200 mg. with 2 plus globulin, chlorides 650 mg. and sugar 39 mg. per hundred cubic centimeters. The Kolmer-Wassermann test was negative and the colloidal gold curve was 4554443221. No acid fast organisms were demonstrated.

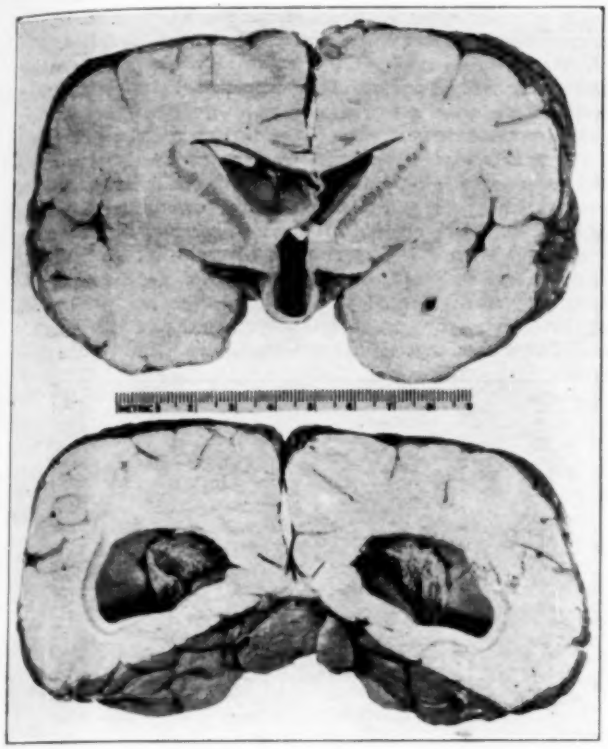

Fig. 1.—Frontal sections of the cerebral hemispheres, disclosing dilatation of the cavities of the lateral and third ventricles.

These data suggested that a low grade chronic infectious process was present: the decreased chloride content and reduced sugar level pointed toward tuberculous meningitis. Considering the absence of other symptoms of tuberculosis, the process was thought to be syphilitic on the basis of the paretic curve. Accordingly bismuth and potassium iodide therapy was instituted. The patient's temperature, which for a while varied between 98 and 102 F., became normal and he improved subjectively and objectively and was discharged with instruction to continue antisyphilitic therapy in his local dispensary.

This treatment was discontinued after thirteen injections when at another clinic he was told that he did not have syphilis. He continued to be unable to work but presented no additional symptoms until May 1942, when, overnight, he completely lost the use of his lower extremities and developed urinary and fecal incontinence. He had several convulsions. He was readmitted to the University Hospitals on June 15, 1942. At this time he appeared poorly nourished, responded to questions slowly and spoke incoherently. His temperature was 97.6 F., the blood pressure 70/50 and the pulse 92 per minute, and regular. His skin was cold and clammy. The pupils were unequal and reacted to light. The biceps and triceps reflexes were hyperactive. The abdominal, cremasteric and patellar reflexes were absent. Babinski's and Hoffman's signs were negative. There was an absence of discriminatory sensations of touch below the seventh cervical vertebra. Blood and urine examinations were essentially negative. The Kahn test of the blood was negative. The nonprotein nitrogen was 35.9 mg. and the blood sugar 165 mg. per hundred cubic centimeters. Examination of the cerebrospinal dynamics gave evidence of an almost complete block of the canal. The cerebrospinal fluid contained 23 white blood cells; total protein was 125 mg., chlorides 520 mg. and sugar 90 mg. per hundred cubic centimeters. The Kolmer-Wassermann test was negative. The colloidal gold curve was 5555543210. A twenty-four hour culture was negative. The blood sugar was 165 mg. with no glucose in the urine on repeated examinations. The patient continued to have a slight inequality of the pupils and a disturbance in lateral gaze on the left. There was bilateral papilledema. Ventriculograms disclosed some increase of the dilatation of the ventricles, including the fourth. A suboccipital craniotomy with cervical laminectomy was contemplated. Before this could be carried out, however, the patient's condition became critical; there was a disturbance of swallowing and a terminal rise in temperature to 107 F. The patient died on July 9, 1942.

At necropsy (ten hours after death) the body was 180 cm. tall and weighed approximately 65 Kg. There was wasting of the flesh, particularly of the extremities. Pressure sores were noted over the sacrum and the trochanteric areas about 10 by 8 cm. each. The superficial lymph nodes were not palpably enlarged. The peritoneal cavity contained no excess fluid; its surfaces were smooth and glistening. There were no anomalies in the position of the abdominal organs. There were some fibrous adhesions posteriorly in the left pleural cavity and some over the base posteriorly in the right pleural cavity. No changes were noted in the pericardial cavity. The heart measured 10.5 cm. from base to apex and 11 cm. across the base. The chambers and their orifices were proportionate and their valves were delicate. The heart weighed 325 Gm.

There was some reddening of the bronchial mucosa, and the lumens of the bronchi contained thick mucus. The interlobar surfaces of the right lung were almost completely obliterated by fibrous adhesions. The anterior portions were pink and crepitant; the posterior portions were lumpy and consolidated. The cut surfaces were mottled red and gray, with the lumens of the bronchial branches prominent and their mucosa reddened. This lung weighed 725 Gm. The left lung resembled the right and weighed 670 Gm.

No pertinent changes were noted in the spleen, liver, gallbladder and biliary ducts, pancreas, esophagus, stomach, duodenum, jejunum, ileum, colon and rectum, adrenal glands and kidneys. The wall of the urinary bladder was of the usual thickness. The mucosa was reddened and there were yellow gray crusts overlying prominent mucosal folds. Smears from these areas disclosed gram positive cocci in clusters. The prostate, seminal vesicles and testes were of usual size and appearance.

Fig. 2.—Mycelia within the subarachnoid space, × 125.

Brain tissue protruded through the trephine holes in the parietal regions of the calvarium. The dura mater was tense.

The leptomeninx over the convex surfaces of the cerebral hemispheres was pale, delicate and transparent. The convolutions were flat and the sulci were narrow. The leptomeninx was thickened and cloudy over the base of the brain, obscuring the vessels of the circle of Willis and the roots of the cranial nerves. There was bulging and thinning of the infundibulum. A thick creamy liquid filled the cisternal spaces including the

Fig. 3.—Mycelia within the subarachnoid space, × 300.

cisterna magna. The cerebral and cerebellar hemispheres, the cerebral peduncles, the pons and the medulla oblongata were proportionate and symmetrical. The brain weighed 1,300 Gm. The sella turcica appeared broad and measured 2.6 by 2.2 by 1.2 cm. The hypophysis was flat and occupied the base of the

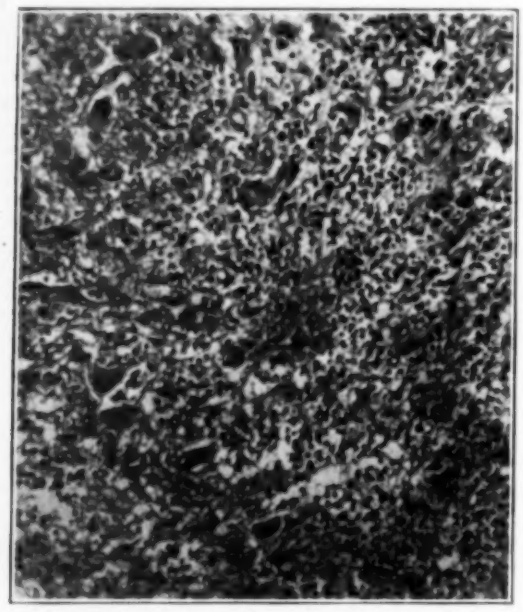

Fig. 4.—Mycelia in the leptomeninx with cellular reaction and within giant cells, × 125.

sella. It measured 1.6 by 1.2 by 0.6 cm. No changes were noted in the dural sinuses and the dura proper. Further examination after fixation disclosed intact symmetrical patterns on the cut surfaces of the cerebral peduncles. The aqueduct of Sylvius was slitlike and measured 0.5 by 0.3 cm. The cut surfaces of the vermis cerebelli had the usual delicate pattern. The cavity of the fourth ventricle was distended. The floor appeared intact. No change was noted on the cut surfaces of the pons, medulla oblongata and cerebellar hemispheres. On frontal sections of the cerebral hemispheres the cavities of the lateral and third ventricles were five to ten times their usual width (fig. 1). There was asymmetry of the foramens of Monro, the right being twice the size of the left. Otherwise there was perfect symmetry of the two sides with the usual patterns of the gray and white matter well preserved. No areas of softening or hemorrhage were noted. On microscopic examination pertinent changes of the heart, lungs, spleen, liver, pancreas, adrenal glands, kidneys, urinary bladder, testes and aorta were limited to acute focal pneumonia, chronic and acute cystitis and, in the testes, atrophy with hyaline change of many of the seminiferous tubules. There was no syphilitic aortitis.

Preparations from the brain were stained with hematoxylin and eosin and also by Gram's method. Within the leptomeninx covering the pons and particularly the cerebellum there was an increase of the connective tissue with structures resembling tubercles. These had central areas of necrosis and giant cells. Within these nodules and elsewhere there were septate mycelia branching at acute angles. Many of these mycelia lay free or surrounded by polymorphonuclear granulocytes (figs. 2 and 3). Other mycelia were intracellular within huge giant

Fig. 5.—Mycelia in the leptomeninx with cellular reaction and within giant cells, × 560.

cells (figs. 4 and 5). Some of these giant cells were of the foreign body type, others of the Langhans type. There were also infiltrations with lymphocytes, plasma cells and large mononuclear cells. There was no involvement of the underlying brain tissue. Ziehl-Neelsen stain for acid fast organisms was negative.

COMMENT

The clinical course and laboratory data provided no conclusive information as to the nature of the central nervous system involvement, except that the presence of a neoplasm could be excluded. The evidence was in favor of a chronic inflammatory process. If mycotic involvement had been suspected, culture of the cerebrospinal fluid in appropriate mediums might have resulted in a demonstration of the causative organism. At necropsy the lesion so closely imitated a tuberculous lesion that no cultures were made. Examination of the fixed and stained tissues, however, revealed the presence of a fungus and the reaction to it. Close scrutiny of this organism left no doubt as to its identity as a fungus of the genus Candida, probably Candida albicans.

SUMMARY

A Negro aged 25 died of meningitis produced by a fungus of the genus Candida, probably Candida albicans. This is the third reported instance of meningeal involvement by the organism Candida and the first in which localization occurred in the central nervous system only.

SEVERE BURNS FROM INFLAMMABLE COWBOY PANTS

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and
H. TAYLOR CASWELL, M.D.
Philadelphia

During the period from August 1944 to March 1945 3 patients with third degree burns involving most of both lower extremities were admitted to Temple University Hospital. These occurred in boys aged 10, 8 and 6½ years respectively and were remarkably similar in distribution, severity and history. All of these children had been wearing cowboy pants covered with a shaggy material and bearing the trade name "Gene Autry." In all 3 cases apparently trivial exposure to fire caused immediate and complete ignition of the pants.

The first patient was playing at a bonfire and an ignited stick, which had been thrown into the air, struck the side of his pants in descent. This was followed by what was described as a sudden bursting into flame of all the shaggy material on the clothing. The second patient ran by a small collection of what was described as smoldering leaves, with immediate and complete ignition of the pants. The third patient leaped over a small pile of burning rubbish with the same immediate result.

In the April 12, 1945 issue of the Philadelphia *Inquirer* an article was carried describing the death of 3 children in Washington, D. C., and of another child in the Philadelphia area from similar accidents. Two additional nonfatal burns were also reported in the Philadelphia area. The newspaper stated that all of these children were wearing the so-called "Gene Autry" cowboy suits, which were manufactured by "a New York

Fig. 1.—Full thickness burns of patient 1 three months after admission, ready for grafting.

concern with another plant in Passaic, N. J." The newspaper also stated that the suits were to be subjected to a Congressional investigation and that "leading Philadelphia area stores have withdrawn this particular type of playsuit from their stocks."

The patients admitted to Temple University Hospital were not mentioned in the newspaper article but had remarkably similar experiences in that the burns were of the third degree and involved the entire circumference of the thighs and lower part of the legs, approximately 30 per cent of the body surface. The feet were not involved in any instance, and only the first patient suffered burns of the buttocks.

Patients 1 and 2 were originally admitted to this institution and treated in an exactly similar fashion. Patient 3 was transferred after six months' treatment in another institution, during which time feces had infiltrated under a soft eschar of hemoglobin and penicillin with prolonged contamination and sepsis.

Fig. 2.—Posterior view of burns of patient 1 three months after admission. Note third degree burns over buttock. Sacral ulcerations are healing decubitus ulcers.

PRINCIPLES OF TREATMENT

The following principles of treatment were used in the three clinical stages of third degree burns:

1. *Stage of Shock.*—On admission the patients were wrapped in sterile sheets and taken to the operating room after appropriate morphine dosage. In the operating room, under aseptic technic, the remaining clothing was cut away and the burned areas were gently cleansed with sterile cotton balls saturated in warm sterile water and white soap. Loose skin was gently debrided and the entire extremity wrapped in petrolatum gauze, dry gauze, mechanic's waste and Ace elastic bandage as recommended by Koch.[1] On return to the ward, plasma infusion was begun. The amount of plasma given was estimated on the percentage of body surface involved, 50 cc. being given for each 1 per cent of body surface burned. By the means of daily hematocrits, proteins and blood counts combined with daily blood chlorides and carbon dioxide combining power estimations the chemical and protein requirements were closely followed. In no twenty-four hour period did the amount of glucose, saline solution and so on exceed the amount of plasma. All the patients were given 100,000 units of penicillin intramuscularly each twenty-four hours in twelve equal doses. Sulfonamides by mouth were given to patients 1 and 2 for the first two weeks following the burn. Massive vitamin therapy was started immediately, which consisted of niacinamide 100 mg., thiamine hydrochloride 50 mg., riboflavin 10 mg. and ascorbic acid 200 mg. daily intravenously and vitamin A 100,000 units daily intramuscularly. At the same time measures were instituted to maintain a concentrated diet containing as high as possible a percentage of protein and carbohydrates. This was accomplished by the use of standard high carbohydrate, high protein hospital formulas and the encouragement of the parents to bring in food of which these children were particularly fond.

2. *Stage of Infection.*—All of these cases were third degree burns and, despite the Koch compression treatment and redress-

1. Allen, H. S., and Koch, S. L.: The Treatment of Patients with Severe Burns, Surg., Gynec. & Obst. **74**: 914-923, 1942.

ings under operating room technic, all became infected. This has been our experience in various cases of third degree burns and also the experience of others. The original dressings were not disturbed until fever, odor and appearance made the diagnosis of infection apparent. All dressings were done in the operating room under aseptic precautions and with the use of general anesthesia. Cultures of the burns were taken whenever it seemed indicated. The initial dressings were accompanied by débridement of obvious slough by sharp dissection. From this time on the dressings were kept saturated with tyrothricin solution and the systemic penicillin was continued. Blood was used frequently during this stage of infection, and at least 500 cc. of blood per week was administered to combat anemia, and amino acids and other substances to maintain blood proteins at a satisfactory level.

During this stage patient 1 exhibited clinical evidence of gastric ulceration, which was treated by an ulcer diet and aluminum hydroxide, with rapid abatement of symptoms. It was a most difficult problem to maintain a high protein intake in these patients in spite of 500 cc. of amino acids intravenously daily. (The lack of appetite was a great tribulation to us.) It is interesting to note that positive nitrogen balance, as evidenced by weight gain, was not attained until grafting was begun.

3. *Stage of Grafting.*—When slough had separated under the tyrothricin dressings and the ulcerated areas appeared to be satisfactorily granulating, grafting was begun. Positive cultures can always be obtained from such granulating areas and were not alone considered as contraindications to grafting. The temperature curve and the patient's nutritional status, as evidenced by his blood proteins, were more reliable indicators. Tyrothricin locally was continued throughout this stage of grafting. Systemic penicillin was also given if any febrile episodes developed during this era. All skin grafts were 0.012 inch in thickness and were removed by means of the Padgett

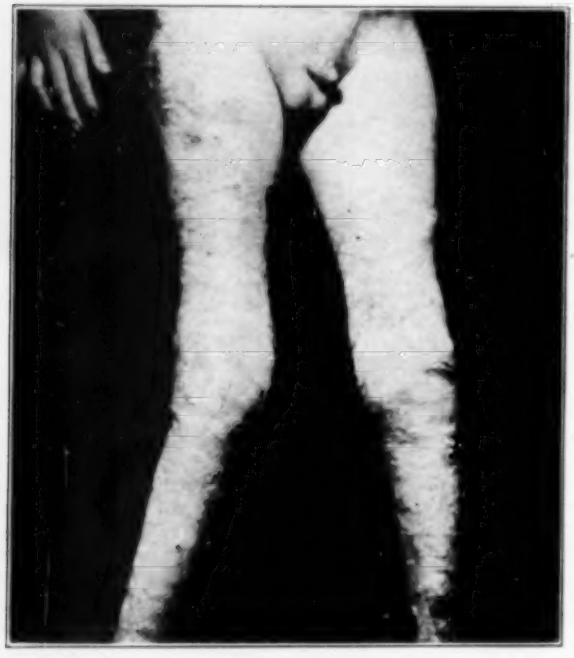

Fig. 3.—Eleven months after admission. Patient 1 walking. Legs entirely covered with skin grafts.

dermatome. It was possible by this means to take several grafts from the same area over a course of months. The Sano [2] plasma clot technic for fixing grafts was used throughout. This consists in using liquefied plasma on the under surface of the grafts and cell extract on the recipient areas. The graft is then put in place and firm, even pressure applied for five minutes. In practically all of the grafting done in these cases this resulted in what would be considered a quite satisfactory take. The dressings were not changed between grafting procedures. Weekly transfusions, daily amino acids and massive vitamin therapy were continued, and the efforts to maintain a high protein, high carbohydrate intake were pursued.

Fig. 4.—Posterior view eleven months after patient 1 was admitted. Ulcerated area on buttock healing rapidly.

Throughout this period all the patients experienced, at intervals, febrile episodes which usually responded to resumption of systemic penicillin and redressing. Cultures of the burned areas during these episodes usually showed hemolytic streptococci, and no grafting was attempted at these times.

RESULTS AT PRESENT

Patient 1 is now completely grafted, walking well and discharged fourteen months after admission. Patient 2 is now 75 per cent covered with grafts and is walking alone eight months after admission. Patient 3 (admitted six months after the burn) is progressing slowly, since he has been the most difficult to handle. His nutritional and vitamin state were extremely negative on admission, his morale low and his lack of appetite exasperating. For long periods small test grafts failed to live, and only in the past three months have we been able to proceed with grafts successfully. In general we have feared massive, one stage coverage grafts where the recipient areas were so huge (30 per cent of the body surface) and the donor areas so limited, since failure would be a catastrophe. His condition is gradually improving. Recent congo red determinations show a positive reaction only on this patient, patients 1 and 2 showing none. He is taking liver substance orally as advised by Jacobi and Grayzel.[3]

Renal function on all 3 patients is not impaired.

CONCLUSION

Material made into clothing should be thoroughly tested as to inflammability before being offered for sale to the public.

2. Sano, M. E.: Coagulum Contact Method of Skin Grafting as Applied to Human Grafts, Surg., Gynec. & Obst. **77**: 510-513, 1943.

3. Jacobi, M., and Grayzel, H.: Generalized Secondary Amyloidosis, J. Mount Sinai Hosp. **12**: 339-363, 1945.

Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

The following additional articles have been accepted as conforming to the rules of the Council on Pharmacy and Chemistry of the American Medical Association for admission to New and Nonofficial Remedies. A copy of the rules on which the Council bases its action will be sent on application.

AUSTIN SMITH, M.D., *Secretary.*

MERCUHYDRIN SODIUM SOLUTION. — Meralluride Sodium Solution.—A sterile aqueous solution containing in each cubic centimeter approximately 119 mg. of mercuhydrin and 13 mg. of theophylline, adjusted with sodium hydroxide to a p_H of about 7.5. Each 1 cc. of mercuhydrin sodium solution contains the equivalent of 39 mg. of mercury and 48 mg. of theophylline-U. S. P.

Actions and Uses: Mercuhydrin Sodium Solution is a mercurial diuretic claimed to be indicated in the edema of cardiorenal disease and of nephrosis, ascites of liver disease and other conditions in which a mercurial diuretic may be proposed.

It is claimed to be well tolerated systemically and significantly free from reaction at the site of injection when given intramuscularly. It is rapidly absorbed following intramuscular injection. It also is administered by intravenous injection.

The drug is contraindicated in acute nephritis and chronic kidney disease in which well defined tubular and glomerular changes are present. Since mercury is known to give rise in sensitive patients to side effects such as stomatitis, gastric disturbance, vertigo, febrile reaction and cutaneous eruptions, it is suggested that initial tests and careful regulation of dosage be followed when mercurial diuretics are used. During prolonged administration the urine should be examined periodically for albumin casts and blood cells.

Dosage.—Depending on the condition of the patient and route and the frequency of administration, the usual dose of Mercuhydrin Sodium Solution is from 1 cc. to 2 cc. In view of occasional cases of idiosyncrasy to mercurials, the initial dose could be 0.5 cc. or less. Subsequent injections may be given twice weekly, as indicated by the condition of the patient. One investigator has recommended smaller doses repeated at shorter intervals and emphasizes the importance of observing daily water balance instead of weekly observations.

Tests and Standards.—

Mercuhydrin sodium solution is clear, colorless to pale yellow and odorless and possesses a bitter taste. The p_H of the solution is between 7.4 and 7.6 at 25 C. Mercuhydrin sodium solution should be protected from light.

Five cubic centimeters of mercuhydrin sodium solution responds to tests for the presence of mercury, allylsuccinylurea and theophylline given under Mercuhydrin-N. N. R. Evaporate 1 cc. of mercuhydrin sodium solution to dryness in a tared porcelain dish and ignite: the residue responds to tests for sodium.

To 5 cc. of mercuhydrin sodium solution add 0.5 cc. of sodium acetate solution and 0.3 cc. of diluted acetic acid; dilute to 10 cc. with water and divide the solution into two portions. Add to one portion 0.2 cc .of sodium sulfide solution and compare with the other portion: only a very faint difference in coloration of the test solution is noticeable immediately.

Determine the mercury content of 2 cc. of mercuhydrin sodium solution, accurately measured, by the method given under Mercuhydrin-N. N. R.: the amount of mercury found is not less than 95 per cent nor more than 105 per cent of 39 mg. per cubic centimeter.

Determine the theophylline content of 5 cc. of mercuhydrin sodium solution, accurately measured, by the method given under Mercuhydrin-N. N. R.: the amount of anhydrous theophylline found is not less than 95 per cent and not more than 105 per cent of 43.6 mg. per cubic centimeter.

LAKESIDE LABORATORIES, INC., MILWAUKEE

Solution Mercuhydrin Sodium: 1 cc. and 2 cc. ampuls.

MANNITOL HEXANITRATE (See New and Nonofficial Remedies, 1945, p. 334).

The following dosage form has been accepted:

WILLIAM H. RORER, INC., PHILADELPHIA

Tablets Mannitol Hexanitrate: 32 mg.

PENICILLIN (See New and Nonofficial Remedies, 1945, p. 214).

The following additional dosage form has been accepted:

ABBOTT LABORATORIES, NORTH CHICAGO, ILL.

Penicillin Sodium Salt: 200,000 Oxford Unit vials.

Council on Foods and Nutrition

ACCEPTED FOODS

The following additional foods have been accepted as conforming to the Rules of the Council on Foods and Nutrition of the American Medical Association for admission to Accepted Foods.

JAMES R. WILSON, M.D., *Secretary.*

PREPARATIONS USED IN THE FEEDING OF INFANTS (*See* Accepted Foods, 1939, p. 156)

Swift & Company, Chicago.

SWIFT'S MEATS FOR JUNIORS, including Diced Beef, Diced Pork, Diced Lamb, Diced Veal, Diced Beef Liver and Diced Calf Heart, are made from meats trimmed of fat, sinews and connective sheaths with added salt, prepared under inspection of the Meat Inspection Division of the United States Department of Agriculture.

Analysis (submitted by manufacturer).—

	Moisture, %	Protein, %	Fat, %	Ash, %
Diced beef	74.7	22.63	1.70	1.47
Diced pork	70.7	21.81	6.48	1.51
Diced lamb	74.3	18.19	6.3	1.41
Diced veal	76.7	20.38	2.1	1.52
Diced beef liver	70.2	21.56	4.33	1.68
Diced calf heart	76.3	18.19	3.35	1.44

Mineral Components:

	NaCl, %	Calcium, Mg./100 Gm.	Phosphorus, Mg./100 Gm.	Iron, Mg./100 Gm.
Diced beef	0.47	10	210	3.3
Diced pork	0.48	14	200	1.5
Diced lamb	0.53	18	180	2.4
Diced veal	0.47	11	210	1.6
Diced beef liver	0.48	30	330	7.2
Diced calf heart	0.41	15	220	4.8

Vitamins.:

	Thiamine, Mg./100 Gm.	Riboflavin, Mg./100 Gm.	Niacin, Mg./100 Gm.
Diced beef	0.017	0.326	4.68
Diced pork	0.452	0.238	3.74
Diced lamb	0.042	0.287	5.33
Diced veal	0.052	0.350	6.28
Diced beef liver	0.03	2.200	7.10
Diced calf heart	0.156	1.067	4.44

Total Calories:

Diced beef	1.05 per gram
Diced pork	1.45 per gram
Diced lamb	1.30 per gram
Diced veal	1.00 per gram
Diced beef liver	1.25 per gram
Diced calf heart	1.03 per gram

SWIFT'S MEATS FOR BABIES, including Strained Beef, Strained Pork, Strained Lamb, Strained Veal, Strained Beef Liver and Strained Calf Heart, are made from meats trimmed of fat, sinews and connective sheaths with added broth and salt and are prepared under inspection of the Meat Inspection Division of the United States Department of Agriculture.

Analysis (submitted by manufacturer).—

	Moisture, %	Protein, %	Fat, %	Ash, %
Strained beef	78.6	17.69	3.01	1.21
Strained pork	75.9	17.06	6.04	1.15
Strained lamb	79.0	15.63	4.48	1.32
Strained veal	82.1	16.38	1.04	1.19
Strained beef liver	78.2	15.94	4.26	1.22
Strained calf heart	82.7	13.38	2.51	1.20

Mineral Components:

	NaCl, %	Calcium, Mg./100 Gm.	Phosphorus, Mg./100 Gm.	Iron, Mg./100 Gm.
Strained beef	0.30	12	140	2.8
Strained pork	0.38	14	180	1.7
Strained lamb	0.45	16	170	2.3
Strained veal	0.38	17	180	1.6
Strained beef liver	0.53	40	270	7.7
Strained calf heart	0.30	12	150	3.6

Vitamins:

	Thiamine, Mg./100 Gm.	Riboflavin, Mg./100 Gm.	Niacin, Mg./100 Gm.
Strained beef	0.010	0.242	3.24
Strained pork	0.346	0.278	4.74
Strained lamb	0.026	0.264	4.00
Strained veal	0.024	0.288	4.90
Strained beef liver	0.014	2.00	4.41
Strained calf heart	0.064	0.818	4.46

Total Calories:

Strained beef	0.98 per gram
Strained pork	1.22 per gram
Strained lamb	1.03 per gram
Strained veal	0.75 per gram
Strained beef liver	1.02 per gram
Strained calf heart	0.77 per gram

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SATURDAY, APRIL 6, 1946

RECURRENT MALARIA

Several thousand soldiers with recurrent attacks of benign tertian malaria were observed by four army medical officers[1] in a U. S. general hospital on a nonmalarial South Pacific island used as a rest area. Fifty soldiers were selected for complete organic and psychologic analysis. These men had been unable to return to combat because of chronic malarial symptoms and the frequency of recurrence (averaging ten attacks over a period of approximately one year). Suppressive therapy with atabrine had not influenced the recurrent course of the disease, although usual antimalarial therapy had readily controlled the severe paroxysms. The group was divided into approximately four equal categories as to state of physical condition and degree of adjustment so that the manifestations of the disease could be correlated. As a whole, the general white population of the army overseas in this area was approximated by the group in age (average 25 years), intelligence distribution and general state of health except for the effects of malaria.

The constancy of symptoms and the variability in physical reaction from severe debility to general good physical condition and the paucity of significant clinical features were impressive. Weight loss in excess of the controls was almost constantly present and was paralleled by the nutritional status and the degree of debility evident on inspection. Otherwise physical examination did not reveal abnormalities except for a palpable liver and spleen in a few cases. Extensive laboratory studies including tests of adrenal function did not show evidence of damage or dysfunction of the organ systems. Repeated malarial attacks and considerable amounts of atabrine had not apparently resulted in any physical impairment in this group other than debility.

Fatigability, the chief manifestation of the disease, was measured objectively by means of a running in place test and the Schneider index. Consistent differences in response were noted between the malarial and control groups, but individual comparisons were not possible because of the diversity of individual responses. The Rorschach technic objectively displayed mental apathy as an expression of fatigue and thus corroborated the clinical impression of lowered vitality, initiative and interest. Further investigation with this test in such cases would be desirable.

The characteristic symptomatology in these chronic malarial patients in intervals between attacks included weakness or fatigability 94 per cent, intolerance to heat 92 per cent, tension 78 per cent, chronic headache of tension type 65 per cent, exertional dyspnea 65 per cent, anorexia 45 per cent, insomnia 45 per cent, "blackouts" and palpitation 40 per cent, and splenic tenderness 27 per cent. From a correlation of these symptoms with physical condition, personality adjustment and malaria the authors concluded that "a considerable portion of the symptoms could be attributed to the recurrent attacks of malaria alone." The best adjusted and the least debilitated patients had relatively few complaints except weakness and fatigability after exercise. The patients who had adjusted poorly in civil or military life made poor adjustment to the recurrent attacks and became incapacitated early with a wide variety of symptoms. The adjustment of the individual to the stresses of illness and to concurrent situational factors contributed to the development, perpetuation and intensification of the symptoms of chronic malaria.

The authors emphasize that treatment should be directed to the person as a whole and not to the malaria alone. Such measures must include the prevention and control of the development of the debility and poor adjustment conducive to chronic symptoms. In military life a study of the entire reaction of the soldier is needed in determining proper duty status and assignment. Hospitalization should be minimized and proper recreation provided to reduce the tendency toward development of neurotic patterns. Thorough simple malarial instruction is essential. In both military and civil practice individual reassurance to patients is necessary to allay the common concerns of future permanent disability and ill health from recurrent malaria, which have arisen from ignorance and misconceptions of the effects of the disease.

The military value of these studies in the effective utilization and treatment of affected personnel is apparent. In addition, the problem of the chronic malarial patient will assume increasing importance in civil life as more and more men are demobilized who have acquired the disease while stationed in malarial areas throughout the world.

1. Tumulty, Philip A.; Nichols, Edward; Singewald, Martin L., and Lidz, Theodore: An Investigation of the Effects of Recurrent Malaria: An Organic and Psychological Analysis of 50 Soldiers, Medicine **25**: 17 (Feb.) 1946.

PAINFUL AMPUTATION STUMPS

Several methods to lessen the risk of development of painful amputation stumps are recommended in the Neurological Section of the Military Surgical Manual.[1] Among these are (*a*) alcohol injection of the nerve stump,[2] (*b*) excision of a wedge of the nerve end and suture of the flaps [3] and (*c*) a combination of the two procedures.[4] Other surgeons have suggested (*d*) cauterizing the end of the nerve with a high frequency current [5] and (*e*) burying the nerve stump in bone.[6] Since these procedures have not been universally effective, Poth and his associates [7] of the Surgical Research Laboratory, University of Texas, have restudied the problem on experimental animals.

In preliminary experiments a 2 cm. segment of the sciatic nerve was excised in a group of 9 dogs under anesthesia and the proximal stump replaced in its bed without further treatment. After periods varying from thirty to ninety days the animals were painlessly killed and the tissues examined. In all instances typical neuroma formation had occurred. In a second group of dogs the proximal nerve stump was injected with absolute alcohol. In all instances typical end-bulb neuromas had formed by the end of thirty days. In still other groups of dogs the proximal nerve stump was placed in a closed cellophane tube or an arterial sleeve or was inserted into a snugly fitting closed glass tube about 2.5 cm. long. In 11 dogs in which the nerve stump had remained within the glass tube there was no evidence of neuroma formation. In 5 of these dogs the observation period was as long as two hundred and thirty days.

From these experiments it appears that the growth pressure of nerve axons can be overcome by their complete isolation from surrounding nutritional factors. Since the glass tube technic is clinically inapplicable, Poth sought to accomplish the same axon inhibition by chemical means. He found that his selected chemical agent must not cause massive necrosis of the nerve, since massive necrosis was equivalent to a simple resection at a higher level. The ideal chemical agent would be one that would inhibit axon growth and at the same time stimulate the growth of surrounding fibrous tissues. This peripheral proliferation would form an enclosing fibrous tube whose lateral pressure might overcome the growth pressure of the regenerating nerve fibers. Poth found that tannic acid and gentian violet are the nearest approach to this ideal axon inhibitor.

To test these substances the proximal nerve stumps of 14 dogs were injected with either 0.5 cc. of 10 per cent tannic acid or 0.5 cc. of 2 per cent gentian violet. In no instance could the development of a neuroma be demonstrated in these dogs on their examination from thirty to ninety days later. The technic was therefore tried on 15 clinical patients. All of the severed nerves which could be identified during amputation of the lower extremity of these patients were injected. To make the injection, a tight rubber band or a small clamp was applied about 3 inches from the end of each severed nerve, and the end of the nerve was ligated with fine silk. Multiple injections were made into the isolated nerve segment, in most cases from 3 to 5 cc. 2 per cent gentian violet being used. The compression clamp or rubber band was then removed.

While the lapse of time is too short to draw final conclusions, the investigators report that patients have not thus far suffered untoward pain because of the procedure, nor has healing been compromised in any way. Poth and his associates hope that this method of preventing the formation of end-bulb neuromas may contribute to the solution of problems of the painful amputation stump and the phenomenon of the phantom limb.

1. National Research Council: Military Surgical Manual, Philadelphia, W. B. Saunders Company, 1943, vol. 6.
2. Huber, G. C., and Lewis, Dean: Amputation Neuromas, Arch. Surg. **1**: 85 (July) 1920.
3. Corner, E. M.: Proc. Roy. Soc. Med. **11**: 7, 1918.
4. Stookey, Byron: Surgical and Mechanical Treatment of Peripheral Nerves, Philadelphia, W. B. Saunders Company, 1922, chapter 21, p. 461.
5. Kirk, N. T.: Amputations, in Lewis, Dean, Practice of Surgery, 1943, vol. iii, chapter 10.
6. Boldrey, Edwin: Amputation Neuroma in Nerves Implanted in Bone, Ann. Surg. **118**: 1052 (Dec.) 1943.
7. Poth, E. J., and Bravo-Fernandez, E.: Prevention of Neuroma Formation by Encasement of the Severed Nerve End in Rigid Tubes, Proc. Soc. Exper. Biol. & Med. **56**: 7 (May) 1944. Poth, E. J.; Fernandez, E. B., and Drager, G. A., ibid. **60**: 200 (Nov.) 1945.

STREPTOMYCIN

Recent reports concerning the value of streptomycin in the treatment of tularemia, influenzal meningitis and urinary infections have created widespread demand for this antibiotic preparation. Unfortunately streptomycin, or perhaps the impurities now present in many commercial preparations, have toxic potentialities. Two fatalities from histamine-like reactions are known to have occurred, eighth nerve damage has been reported and delayed fatty infiltration of the kidneys has been observed in animals following administration of streptomycin. Not all batches of this drug produce these reactions; however, only extensive and well controlled laboratory examinations of each batch can separate the harmful from the safe lots. In addition, the difficulties encountered in the production of streptomycin are greater than those encountered in the production of penicillin.

Because of the peculiar problems incident to the production of penicillin and because of the importance of the drug, Congress enacted special legislation to ensure the safety and efficacy of use of each batch of this drug. This legislation provides for certification of each batch of penicillin by the Food and Drug Administration before interstate distribution. Such legislation has not yet been enacted with respect to streptomycin. Temporary control is now exercised by the Civilian Production Administration General Allocation order M-300 as amended.

At a recent meeting of the Food, Drug and Cosmetic Section of the New York Bar Association a resolution

was passed condemning further legislation designed to amend the Federal Food, Drug and Cosmetic Act to provide control over specific drugs. Such legislation does not seem desirable. The New Drug provisions of the Federal Food, Drug and Cosmetic Act might however be amended to provide for the certification of any new drug when the administrator of the Federal Security Agency, on adequate evidence, deems such certification necessary for the protection of the public health. Certainly the problems involved in the production and distribution of safe and efficacious batches of streptomycin are serious. The record of the Food and Drug Administration in ensuring a safe and efficacious supply of penicillin commends the procedure now in force for the control of this drug. Furthermore, since it is quite probable that new antibiotics will be discovered for which a form of predistribution control will be desirable, general legislation to provide a mechanism to meet this need as it arises appears to be highly desirable.

Current Comment

SIMPLE TEST OF BLOOD AMYLASE ACTIVITY IN PANCREATIC AND OTHER DISEASES

The exact chemical nature of amylase is not known. At present the amount of amylase in the blood under different conditions cannot be determined, but its amylolytic activity can be estimated more or less closely by various methods. Normally the amylase activity of the blood appears to remain within fairly constant limits. An increase occurs in the early stages of acute pancreatitis;[1] consequently estimations of the amylase activity may be helpful in the diagnosis of pancreatic and other diseases. A number of methods are available for that purpose, but as yet a reliable and simple method for routine work has not come into general use. The method worked out by Polowe[2] seems well suited for practical use at this time. He estimates the amylase activity of blood by the amount of sugar produced by plasma or serum in starch solution under standard conditions. After incubation of such a mixture for thirty minutes at 37.5 C. a small quantity of the mixture is added to copper solution (Benedict's), which is boiled and centrifugated. The resulting precipitate is compared with that in a control mixture with normal plasma or serum and subjected to the same treatment. The results are recorded in general terms as showing normal, decreased or increased amylase action. Polowe found this simple method valuable in the diagnosis especially of acute pancreatitis in which the amylase activity of blood was increased in the early stages. But increased activity was not pathognomonic of pancreatitis, as increase was found to occur in some cases of pneumonia, high intestinal obstruction, acute splenic trauma, duodenal ulcer, perforation of gastric ulcer and other conditions. Polowe also enumerates a number of conditions in which he found diminished amylase activity of the blood, but in no case was decrease associated with acute pancreatitis. He mentions especially that, in cases of epigastric pain or distress as the chief symptom, tests of blood amylase activity may prove a valuable diagnostic aid.

1. Elman, Robert; Arneson, Norman, and Graham, E. A.: Value of Blood Amylase Estimation in the Diagnosis of Pancreatic Disease, Arch. Surg. **19**: 943 (Dec.) 1929. Lewison, E. F.: The Clinical Value of the Serum Amylase Test, Surg., Gynec. & Obst. **72**: 202 (Feb.) 1941.

2. Polowe, David; Ratish, H. D., and Bullowa, J. G. M.: Measurement of Blood Amylase Activity by Cuprous Oxide Precipitation, Am. J. Clin. Path., Tech. Supp. **6**: 62 (Sept.) 1942. Polowe, David: Blood Amylase, ibid. **13**: 288 (June) 1943; Blood Amylase Activity in Pancreatitis and Other Diseases, a Simple Diagnostic Aid, Surg., Gynec. & Obst. **82**: 115 (Feb.) 1946.

IMMERSION FOOT AND FROSTBITE

Patients with immersion foot or frostbite frequently have late complications which present problems of treatment, disability, evaluation and rehabilitation. These patients may have annoying complaints of a neuritic or vasospastic nature in addition to any disability caused by the loss of fingers or toes. There are disturbances of cutaneous sensations—anesthesia, hyperesthesia—or vasospastic symptoms such as hyperhidrosis, claudication, cyanotic attacks or ulceration. Deep pain or pain on use may be the principal disabling complaint. In 23 cases of immersion foot or frostbite Southworth[1] used sympathectomy in 4, alcohol sympathetic blocks in 9 and repeated procaine blocks in 4. Disturbances of cutaneous sensation, which are not especially disabling, were frequently relieved by temporary sympathetic block. However, when the symptoms were distressing and not relieved by alcohol blocks, sympathectomy provided relief. Alleviation of vasospastic symptoms was also provided by alcohol blocks. Since these symptoms regress spontaneously and may not become static for as long as eighteen months after injury, sympathectomy can be deferred. If thinning of the skin appears within the first three months, sympathectomy should be performed. Unfortunately the deep pain is not influenced by sympathectomy or alcohol block. In this small group of patients with immersion foot and frostbite sympathectomy has produced beneficial effects on certain late symptoms but does not relieve the deep pain or prevent partial disability.

1. Southworth, James L.: The Role of Sympathectomy in the Treatment of Immersion Foot and Frostbite, New England J. Med. **233**: 673 (Dec.) 1945.

EXTENSION OF INTERNSHIPS

The Procurement and Assignment Service reports that its office has been flooded with requests for extensions of internships to July 1, 1946. Early in January 1945 Directive 386 was distributed to all hospitals, stating specifically that each extension must be individually requested before February 1. The Procurement and Assignment Service now announces that it is not in a position at this time to ask cancellation of active duty orders and that even under circumstances of urgent and dire need, such as may be found in small hospitals, the Army and the Navy will not be able to give consideration to such requests at this late date.

MEDICINE AND THE WAR

VETERANS

APPOINTED CHIEF MEDICAL DIRECTOR OF DEPARTMENT OF MEDICINE AND SURGERY

Gen. Omar N. Bradley, administrator of veterans affairs, recently announced that Major Gen. Paul R. Hawley retired from the Army, closing a career of twenty-nine years in the Army Medical Corps, to accept an appointment as chief medical director of the Department of Medicine and Surgery in the Veterans Administration.

OPPORTUNITIES FOR RESIDENCY TRAINING

The Veterans Administration, Washington, D. C., recently announced that the selection of residents and the maintenance of standards of training has been vested in Dean's Committees of the medical schools which are affiliated with the Veterans Administration hospitals. Applications should be made directly to these committees, a list of which follows:

Veterans' Hospital at:	Chairman of Dean's Committee	Representing Medical Schools of
* San Francisco	Dr. Howard C. Naffziger University of California Medical School San Francisco 22	California Stanford
* Los Angeles	Dean Burrell O. Raulston University of Southern California Medical School 2551 University Avenue Los Angeles 7	Southern California Medical Evangelists
* Washington, D. C. (Mount Alto)	Dean Walter A. Bloedorn George Washington University School of Medicine 1335 H Street N.W. Washington 5, D. C.	George Washington Georgetown
Indianapolis	Dr. Matthew Winters, secretary 23 East Ohio Street Indianapolis	Indiana
Chicago (Hines) (Vaughan)	Dean J. Roscoe Miller Northwestern University Medical School 303 East Chicago Avenue Chicago	Illinois Northwestern Loyola
Excelsior Springs, Mo. (tuberculosis only)	Dean Harry R. Wahl University of Kansas School of Medicine 39th Street and Rainbow Blvd.	Kansas
Louisville, Ky. (Nichols General Hospital)	Dr. Arnold Griswold University of Louisville School of Medicine 101 West Chestnut Street Louisville 2, Ky.	Louisville
New Orleans (LaGarde General Hospital)	Dean H. W. Kostmayer Tulane University School of Medicine 1430 Tulane Avenue New Orleans	Louisiana State Tulane
* Baltimore (Fort Howard)	Dr. Perrin Long, secretary Johns Hopkins University School of Medicine 710 West Washington Street Baltimore 5	Johns Hopkins Maryland
Boston (West Roxbury)	Dean C. Sidney Burwell Harvard Medical School 25 Shattuck Street Boston 15	Boston Harvard Tufts
Dearborn, Mich.	Dean Hardy A. Kemp Wayne University College of Medicine Detroit 1	Wayne
Minneapolis	Dean Harold S. Diehl University of Minnesota Medical School Minneapolis 14	Minnesota
New York (Bronx)	Dean Willard C. Rappleye 630 West 168th Street New York 32	Columbia Cornell Long Island Medical College New York University New York Medical College
Oteen, N. C. (tuberculosis only)	Dean Wilburt C. Davison Duke University School of Medicine Durham, N. C.	Duke
White River Junction, Vt.	Dean Rolf C. Syvertsen Dartmouth Medical School Hanover, N. H.	Dartmouth
Cleveland (Brecksville)	Dean Joseph T. Wearn Western Reserve University School of Medicine 2109 Adelbert Road Cleveland 6	Western Reserve
Oklahoma City	Dean Wann Langston University of Oklahoma School of Medicine 801 Northeast 13th Street Oklahoma City 4	Oklahoma
* Portland, Ore.	Dean D. W. E. Baird University of Oregon Medical School Portland 1, Ore.	Oregon
Pittsburgh (Aspinwall)	Dean William S. McEllroy University of Pittsburgh School of Medicine Bigelow Boulevard Pittsburgh	Pittsburgh
Nashville, Tenn. (Thayer General Hospital)	Dean Ernest W. Goodpasture Vanderbilt University School of Medicine 21st Ave. South at Edgehill Nashville 4, Tenn.	Vanderbilt
Dallas, Texas (Lisbon) (Ashburn General Hospital)	Dean Tinsley R. Harrison Southwestern Medical College 2211 Oak Lawn Dallas 4, Texas	Southwestern
Salt Lake City	Dr. H. L. Marshall University of Utah School of Medicine Salt Lake City	Utah
Richmond, Va. (McGuire General Hospital)	Dean J. P. Gray Medical College of Virginia Richmond, Va.	Virginia
Wood, Wis.	Dean Eben J. Carey Marquette University School of Medicine 561 North 15th Street Milwaukee 3	Marquette
* Topeka, Kan.	Dr. Kurt Menninger Menninger Clinic Topeka, Kan.	

* Neuropsychiatric residencies available.

At the present time practically all the hospitals listed offer residency training in internal medicine, general surgery, radiology and pathology. Some of them can also provide training in orthopedics and urology. The respective specialty boards have assured their provisional approval of these programs, but it is to be understood that full accrediting cannot be granted until the plan is in operation and the hospitals have been inspected. Training in the subspecialties of internal medicine and the surgical specialties, including ophthalmology and otolaryngology, will be offered wherever it is possible to provide adequate material and qualified supervision. It is unlikely that training can be provided in gynecology.

Training in the fields of tuberculosis and neuropsychiatry is also available. Several residencies in tuberculosis are indicated, and inquiries concerning other opportunities should be addressed to Dr. John Barnwell, acting assistant director of Tuberculosis Service, Veterans Administration, Washington, D. C. Information concerning traiping in neuropsychiatry may be obtained from Dr. Daniel Blain, acting assistant director of Neuropsychiatric Service, Veterans Administration, Washington, D. C.

The list of dean's committees includes only those whose organization has progressed to the point where they are ready to accept applications for residencies. Additional openings will be available within a short time as the program develops.

DISABLED VETERANS TO TRAIN FOR SKILLED JOBS

Dr. Paul R. Hawley, chief medical director of the Veterans Administration, recently announced the first industrial agreement to train severely disabled veterans in Veterans Administration hospitals for skilled and semiskilled jobs. The Bulova School of Watchmaking, Woodside, L. I., N. Y., will conduct the program under arrangements negotiated by Dr. Donald A. Covalt, acting assistant director of Veterans Administration Medical Rehabilitation, and Stanley Simon, trustee of the Bulova school.

"Severely disabled veterans who have a special aptitude for precision work will be given an opportunity for this training," Dr. Hawley stated. The training course will be tailored to each patient's individual work tolerance, Dr. Covalt said. He added that a veteran may work only an hour a day if that is all the time he can spend at the training without endangering his health.

Although there is no set time for the handicapped veteran to complete the course, Veterans Administration officials said it probably would take about a year; if the veteran does not complete his training while still in a Veterans Administration hospital, he can go to the Bulova School of Watchmaking on Long Island.

The work will be conducted principally in the seven paraplegic or spinal cord injury centers which the Veterans Administration is in the process of setting up or taking over from the Army. However, other severely handicapped veterans will participate in the program.

Approximately 400 paraplegics are in Veterans Administration hospitals at present, but some 1,600 more who are now in army and navy hospitals will be transferred to the Veterans Administration in the near future. The seven centers include five operated by the armed services that will be taken over intact and two Veterans Administration hospitals which have specific facilities for such patients.

These paraplegic centers will be in Framingham, Mass.; New York City (Bronx Veterans Administration Hospital); Richmond, Va.; Memphis, Tenn.; Pittsburgh (Aspinwall Veterans Administration hospital); Chicago, and Los Angeles.

PRIVATE MENTAL HYGIENE CLINICS

The Department of Medicine and Surgery has received inquiries as to whether the Veterans Administration will cancel contracts with private mental hygiene clinics for the outpatient treatment of veterans when the Veterans Administration Mental Hygiene Clinics are organized and functioning. This has resulted in hesitancy on the part of some clinics to negotiate contracts.

In respect to these inquiries, it is the policy of the Veterans Administration to continue all such contracts indefinitely, provided the caliber of work justifies their continuation.

SPECIAL CENTER FOR TUBERCULOSIS

Pending expansion of Veterans Administration facilities for the care of tuberculous patients, Moore General Hospital, Swannanoa, N. C., has been designated as a specialty center for tuberculosis. The large number of examinations at separation centers has led to the discovery of cases of tuberculosis at a rate temporarily exceeding the capacity of Fitzsimons and Bruns general hospitals and tuberculosis hospitals of the Veterans Administration.

APPOINTED TO VETERANS ADMINISTRATION

Dr. Karl M. Bowman, professor of psychiatry in the University of California Medical School, San Francisco, has been appointed consultant in neuropsychiatry for Branch 12 of the Veterans Administration. He will supervise neuropsychiatric activities of the Veterans Administration in California, Arizona and Nevada.

APPOINTED HEAD OF VETERANS HOSPITAL AT NEWINGTON, CONN.

Dr. Lewis G. Beardsley was recently appointed head of the Newington Veterans' Facility, succeeding Myer Schwolsky, who will remain in office as manager of the Hartford Regional Office of the Veterans Administration. Dr. Beardsley was formerly manager of the Diagnostic Center in Washington, D. C.

ARMY

COMMISSION APPOINTED TO STUDY PROSTHETIC PROGRESS IN EUROPE

Five army and civilian experts comprising a commission on prosthetic devices will leave Washington soon for a study of European technics in amputation surgery, developments in the field of prosthetics and artificial limbs, and the rehabilitation and reconditioning of amputees. The commission is being sent by Major Gen. Norman T. Kirk, Surgeon General of the Army, at the direction of Secretary of War Patterson. It will visit scientific centers in England, France, Switzerland, Germany, Sweden and possibly Russia. Heading the unit is Col. Leonard T. Peterson, Medical Corps, of Washington, D. C., chief of the amputation and prosthetic unit, Surgeon General's Office. Other members are Dr. Paul E. Klopsteg, director of research at the Northwestern University Technological Institute; Lieut. Col. Robert G. F. Lewis, Ordnance Department of New York City, engineer assigned to the Surgeon General's Office; Lieut. Col. Rufus H. Alldredge, Medical Corps, of New Orleans, chief of the amputation section, England General Hospital, Atlantic City, N. J., and Mr. Edmond N. Wagner of San Marino, Calif., consulting engineer. Dr. Klopsteg is chairman of the Committee on Prosthetics of the National Research Council. Mr. Wagner formerly was chief of the engineer section of the Office of Scientific Research and Development. Technician Third Grade John P. Gavell, Medical Department, of Danbury, Conn., will accompany the group as recorder.

For several months members of the commission have been making preliminary investigations of the latest technics in amputation surgery and developments in prosthetic devices, particularly those developed by German scientists which were unavailable for study during the war.

One of the types of surgery to be investigated is cinoplastic surgery, which involves connection of the activating cords of the artificial limb to the muscles by means of pins made of inert or nonirritating material. The pin is inserted through the skin lined tunnel in the muscle. While this treatment has been used to some extent in treatment of amputees, the commission hopes to find means of improvement to increase the utility of the artificial limb. Research is now conducted which suggests that cinoplastic surgery may be extensively applied in prostheses in the near future.

COMMANDER OF SEVENTH INFANTRY DIVISION'S MEDICAL BATTALION

Capt. Albert Rosner, formerly of Camden, N. J., was recently named commander of the Seventh Infantry Division's medical battalion. For medical work with front line troops he was awarded the combat stars in the Philippine and Ryukyus Island battles and the combat medical badge for Okinawa. Dr. Rosner graduated from Hahnemann Medical College and Hospital of Philadelphia in 1941 and entered the service Aug. 1, 1942.

TILTON GENERAL HOSPITAL COMMENDED

The Meritorious Service Plaque was recently awarded to Tilton General Hospital, Fort Dix, N. J., for the superior manner in which the men's detachment and the three WAC companies discharged their responsibilities. All during the time Tilton Hospital was active the enlisted and WAC units maintained the highest professional standards in the receiving, treating and disposition of patients, and in addition they rendered valuable service in the medical training programs conducted there by the Army.

ARMY AWARDS AND COMMENDATIONS

Captain John R. Bobb

The Bronze Star was recently presented to Capt. John R. Bobb, Lykens, Pa., "for heroic achievement in action in the vicinity of Oberzerf, Germany, on March 13, 1945. Captain Bobb was on reconnaissance patrol in the town when a soldier received a serious sucking wound in the chest. Without regard for his own personal safety, Captain Bobb proceeded alone approximately 100 yards to give the man immediate aid and successfully evacuated him to the aid station for further treatment. Later during an intense artillery barrage Captain Bobb again left shelter to aid men wounded by shell fragments. During the intense fire his aid station was kept in constant operation in spite of a direct rocket hit and, having no assistant battalion surgeon, Captain Bobb personally maintained liaison with his battalion. Captain Bobb's courage and aggressiveness greatly aided in saving the lives of numerous men and to the success of his battalion." Dr. Bobb graduated from Temple University School of Medicine in 1942 and entered the service Aug. 13, 1943.

Colonel Joseph Berkson

The Legion of Merit was recently awarded to Col. Joseph Berkson, Rochester, Minn., head of the Section on Biometry and Medical Statistics of the Mayo Clinic. "As chief of the statistics division, office of the air surgeon, headquarters army air forces," according to the citation, Colonel Berkson "contributed immeasurably to the advancement of medical statistics in developing new methods of presenting and interpreting statistical data as applied to army air force matters. His display of professional skill and high standards of efficiency in disease control contributed to a great extent to the success of the army air forces health programs." Dr. Berkson graduated from Johns Hopkins University School of Medicine, Baltimore, in 1927 and entered the service May 12, 1942.

Major John J. McAleese

John J. McAleese, Pittsburgh, was recently awarded the Legion of Merit for "instituting a comprehensive research program which evolved the 'kleenex-penicillin' treatment for burns, officially recognized as superior to any other treatment known to medical science and particularly successful in tropical climates. This new method resulted in economy of materials, reduced sepsis (infection), it alleviated suffering and expedited healing in numerous cases. Through extensive use of the treatment, hospitalization and lost time were materially shortened." Dr. McAleese graduated from the University of Pittsburgh School of Medicine in 1935 and entered the service July 15, 1942.

Colonel Aubrey Kenna Brown

Col. Aubrey Kenna Brown (retired), McAllen, Texas, was recently awarded the Legion of Merit for the professional and administrative ability which he displayed as commanding officer, Regional Hospital, Camp Swift, Texas, from March 1942 to November 1945. The citation called attention to the fact that "the reconditioning program for return to duty or civil status of convalescent soldiers and the program of training for medical units for overseas service, organized and supervised by Colonel Brown, were particularly valuable and reflected his keen devotion to the welfare of the sick and wounded." Dr. Brown graduated from Bennett College of Eclectic Medicine and Surgery, Chicago, in 1912 and entered the service July 1, 1920.

Captain Richard J. Cross

Capt. Richard J. Cross, New York, was recently awarded the Bronze Star "for meritorious service in connection with military operations against the enemy on Leyte during the Ormoc Bay campaign." Dr. Cross graduated from Columbia University College of Physicians and Surgeons, New York, in 1941 and entered the service Oct. 1, 1942.

Lieutenant Colonel Norman Q. Brill

The Legion of Merit was recently awarded to Lieut. Col. Norman Q. Brill, deputy director of the neuropsychiatry consultants division, Office of the Surgeon General, for his work in "organizing the treatment program for psychiatric patients in convalescent hospitals, one of the notable therapeutic achievements of the Medical Department in this war." The citation further stated that "through superior professional ability, excellent planning and broad experience he initiated numerous significant and highly important policy changes with regard to the salvage of manpower, management of psychiatric casualties and dispositional procedures. His unusual judgment of relative values, keen perspicacity and untiring devotion to duty contributed materially to the achievements of the Neuropsychiatry Consultants Division, reflecting great credit on himself and on the Medical Department." Dr. Brill graduated from the New York University College of Medicine, New York, in 1934, was commissioned in the Army Medical Reserve Corps in June 1934 and went on active duty in April 1941.

Colonel Albert E. McEvers

Col. Albert E. McEvers, commanding officer of Kennedy General Hospital, Memphis, Tenn., was recently awarded the Legion of Merit. According to the citation accompanying the award, "Colonel McEvers, as commanding officer, from March to September 1945, demonstrated exceptional qualities of leadership and administrative ability in supervising an extensive expansion of facilities to take care of a greatly increased patient load. Under his capable direction the work of this hospital in the treatment of all types of overseas casualties was outstanding and reflected great credit on the Medical Department of the Army." As reserve officer, Colonel McEvers served with the Medical Corps in France during the first world war. On his return to the United States in 1918 he was commissioned a major in the Medical Corps of the Officers' Reserve Corps. He was appointed a full colonel in the Reserve Corps in 1934 and again in December 1939, since which time he has been on active duty. Dr. McEvers graduated from the Chicago College of Medicine and Surgery in 1912.

Captain Richard G. Fort

The Bronze Star was recently awarded to Capt. Richard G. Fort, Evanston, Ill., for his work from July 14 to Aug. 25, 1944. According to the citation accompanying the award, "Captain Fort enabled his medical battalion to provide efficient medical service for the sick and wounded of the division, maintaining superior liaison of widely separated subordinate units. Captain Fort often traveled far in advance of the medical battalion to reconnoiter sites for installations, necessitating long rides day and night under trying conditions. His profound knowledge of medical battalion functions and his efficient performance of duties reflect great credit on himself and on the medical corps." Dr. Fort graduated from the University of Illinois College of Medicine, Chicago, in 1939 and entered the service March 31, 1941.

Lieutenant Colonel Charles R. Rein

The Legion of Merit was recently presented to Lieut. Col. Charles R. Rein, New York, who, the citation said, "expanded and developed the serological service of the Army Medical Department while a member of the Army Medical School from November 1942 to October 1945. His establishment of a consultation service expedited investigative studies and the treatment of venereal disease." Dr. Rein graduated from the University of Michigan Medical School, Ann Arbor, in 1928 and entered the service Aug. 12, 1942.

Captain Carl E. Billings

Capt. Carl E. Billings, Barrington, Ill., was recently awarded the Bronze Star for meritorious service performed in combat operations against the enemy in Belgium and Germany during the first part of the year 1945. Captain Billings' services resulted in the saving of many lives which otherwise would have been lost. Dr. Billings graduated from the University of Chicago School of Medicine in 1942 and entered the service July 1, 1943.

Major Raymond J. Byron

Major Raymond J. Byron, Schenectady, N. Y., was recently awarded the Legion of Merit "for exceptionally meritorious conduct in the performance of outstanding services with the Fifth Army." Dr. Byron graduated from Albany (N. Y.) Medical College in 1938 and entered the service June 19, 1942.

MISCELLANEOUS

DR. FLOYD S. MARKHAM AWARDED AMERICAN TYPHUS COMMISSION MEDAL

Floyd S. Markham, Ph.D., of the department of bacteriology of Ohio State University, Columbus, was recently awarded the Army Typhus Commission Medal. He was a member of the Rockefeller Foundation Typhus team which worked with the Army in control of the threatened epidemic in Naples. He was stationed first in North Africa and then in Italy with the Rockefeller group, the Army and the Allied Control Commission, "rendering exceptionally meritorious service in connection with the control of typhus." According to the citation Dr. Markham, following the task in Naples, did considerable research on the vital statistics of the epidemic and compiled valuable scientific data showing the history of the epidemic. "He played an important part in a great modern achievement in preventive medicine," the citation states.

HOSPITALS NEEDING INTERNS AND RESIDENTS

The following hospitals have indicated to the Council on Medical Education and Hospitals that they have not completed their house staff quota allotted by the Procurement and Assignment Service:

INDIANA

St. Joseph Hospital, Fort Wayne. Capacity, 350; admissions, 6,950. Sister M. Geroldine, Superintendent (4 interns; resident—pathology).

Memorial Hospital, South Bend. Capacity, 275; admissions, 9,180. Mr. A. J. Sullivan, Administrator (interns; residents—mixed service, July 1).

KENTUCKY

Jewish Hospital, Louisville. Capacity, 100; admissions, 3,479. Mr. E. D. Witham, Superintendent (resident—mixed service).

LOUISIANA

U. S. Marine Hospital, New Orleans. Capacity, 572; admissions, 6,939. Dr. J. M. Lubitz (resident—Pathology).

MASSACHUSETTS

Wesson Memorial Hospital, Springfield. Capacity, 112; admissions, 3,022. Mr. J. M. Dunlop, Superintendent (intern; residents—mixed service).

NEW JERSEY

Hackensack Hospital, Hackensack. Capacity, 300; admissions, 9,360. Mrs. Mary Stone Conklin, R.N., Superintendent (3 residents—mixed service, July 1, discharged medical officers).

NEW YORK

Deaconess Hospital, Buffalo. Capacity, 344; admissions, 7,010. Mr. Vernon A. Reed, Superintendent (2 interns).

OHIO

St. Luke's Hospital, Cleveland. Capacity, 375; admissions, 10,526. Dr. F. G. Carter, Superintendent (resident—otolaryngology).

TEXAS

El Paso City-County Hospital, El Paso. Capacity, 211; admissions, 2,441, Colonel George W. Cook (U. S. Army, retired), Superintendent (3 interns, July 1).

VIRGINIA

Grace Hospital, Richmond. Capacity, 110; admissions, 4,026. Mr. R. H. Thomas, Managing Director (2 residents—mixed service).

WASHINGTON

Northern Permanente Foundation, Vancouver. Capacity, 360; admissions, 11,087. Dr. J. W. Neighbor, Medical Director (resident—surgery).

WEST VIRGINIA

Wheeling Hospital, Wheeling. Capacity, 270; admissions, 6,287. Sister Mary Ruth, Administrator (interns; residents—mixed service, July 1. Women interns considered).

APPOINTED SURGEON GENERAL OF SELECTIVE SERVICE SYSTEM

Col. Richard Henry Eanes, in addition to his other duties, was recently appointed Surgeon General of the Selective Service System, Washington, D. C. Dr. Eanes graduated from the Medical College of Virginia, Richmond, in 1911 and entered the service July 1, 1920.

UNRRA NEWS

Ask Help in Relieving Shortage of Bread Grains

The director general of the United Nations Relief and Rehabilitation Administration, Herbert H. Lehman, recently appealed to the United Nations Assembly for help in relieving the grave situation arising from the critical world shortage of bread grains, rice and fats.

The director general called attention to steps already taken by the governments of Australia, Canada, the United Kingdom and the United States to improve the situation but declared that, despite these measures, UNRRA thus far has been unable to receive assurance of sufficient supplies to meet even the most urgent needs of the receiving countries for grains and fats.

In a cablegram addressed to Trygve Lie, secretary general of the United Nations Organization, Mr. Lehman asked the assembly to take "such action as may seem fit and as may prompt the supplying countries to increase their exports and the consuming countries to utilize their imports and indigenous supplies in the wisest manner possible." He stated also that he made public appeals to the people of the supplying nations and called for further sacrifices to forestall the tragic fate facing the millions of people in Europe and Asia.

The director general informed the assembly of recommendations which had been made by the UNRRA council's committee on supplies and which included (1) that the governments concerned be urged to reconsider most urgently the decision taken in mid 1945 to remove wheat and flour from international allocation, (2) that the Cereals Committee of the Combined Food Board, in making allocations or programing exports of wheat and flour, take into consideration the extent to which the claimants have followed the example set by UNRRA in making the maximum substitution of other cereals for wheat and (3) that supplying governments make available and intergovernmental allocating agencies recommend allocations of additional quantities of wheat, rice, fats and other foods for countries receiving UNRRA assistance, even though such action may necessitate some further sacrifices.

The director general submitted records to show that allocations of bread grains, rice and fats were entirely inadequate to meet UNRRA's basic requirements.

Czechoslovakian Hospitals Given Medical Supplies

All hospitals and medical institutions in Czechoslovakia recently received their medical supplies from UNRRA. UNRRA now provides 10 per cent of all medical supplies used in Czechoslovakia. The Ministry of Health allocates the UNRRA contribution to medical institutions and supplies pharmacists, who sell to the general public from accumulated reserves or from German stores taken at the time of the May revolution.

The greatest problem in medical supply in Czechoslovakia, it is said, is the shortage of insulin. There are 6,000 persons with diabetes in Bohemia and Moravia who need permanent treatment; they require 8,000,000 units of insulin monthly, but Czechoslovakia manufacturers have facilities to manufacture only 1,000,000 units.

In May 1945 the United Kingdom supplied enough material to permit the manufacture of 10,000,000 units. Since then UNRRA has supplied Czechoslovakia with enough crystallized insulin to enable manufacturers to make 30,000,000 units. A recent agreement with Denmark provides that in exchange for a quantity of pancreas Denmark is to deliver 40,000,000 units to Czechoslovakia. There is enough insulin in the country at present to treat diabetic patients for nine months. The Ministry of Health is working out plans to increase the monthly production of insulin to 5,000,000 units by the time the present reserve is exhausted.

Czechoslovakia, which prior to the war imported most generally known medicines and the raw materials to manufacture them from Germany, is now making efforts to obtain these supplies from firms in England, the United States, Switzerland or France.

PHYSICIANS SEPARATED FROM SERVICE

ARMY MEDICAL CORPS OFFICERS RECOMMENDED FOR/OR RELIEVED FROM ACTIVE DUTY

Alabama

Di Tata, D., Major, 602 Norman Bridge Rd., Montgomery.
Henderson, Andrew D., Major, 259 St. Francis St., Mobile.
Huey, Thomas F. Jr., Lt. Col., 801 Glenwood Terr., Anniston.
Hunter, John W. Jr., Major, 3412 Montevallo Rd., Birmingham.
Weil, C. K., Major, Rt. 4, Box 343, Cook's Rd., Montgomery.

Arizona

Bate, Thomas H., Lt. Col., 15 E. Monroe Ave., Phoenix.
Kaufman, Jack, Capt., 2711 E. Lee St., Tuscon.
Mills, Charles S., Major, 361 E. Alvarado Rd., Phoenix.
Smith, Leslie B., Lt. Col., Grunow Clinic, Phoenix.
Stanley, John F., Major, 167 E. 3rd St., Yuma.

Arkansas

Blanton, Martin E., Capt., 404 Jefferson, Jonesboro.
Cohen, Louis A., Major, U. S. Vet. Hosp., North Little Rock.
Etter, Roscoe, Lt. Col., Veterans Admin., Fayetteville.
Finney, Charles H., Major, 622 Belle Ave., Ft. Smith.
Hairston, Glenn G., Major, Prescott.
Hanchey, Carl C., Major, DeQueen.
Hassell, Lyle L., Capt., Conway.
Jackson, Ulys, Capt., 412 E. Kentucky St., Blytheville.
Lee, Walter J., Major, 824 Oak St., Hot Springs National Pk.
Lyons, Virgle E., Capt., 118 Franklin St., North Little Rock.
Sheppard, Julius K., Capt., 111! W. Main St., El Dorado.
Teeter, Brooks R., Major, 803 S. Erie St., Russellville.

California

Abramson, Arthur J., Capt., 356 26th Ave, San Francisco.
Ackert, Joseph W., 1st Lt., Route 1, Box 29C, Atascadero.
Alsberge, Edward W., Major, 1636 Allen Ave., Glendale.
Barnhill, John R., Capt., Kern County Hosp., Bakersfield.
Billingsley, Gordon D., Capt., 406 Orange St., Los Altos.
Chalian, Alexander R., Capt., 2533 Havenscourt Blvd., Oakland.
Coffelt, Ralph W., Lt. Col., 4614 Sunset Blvd., Los Angeles.
Cormia, Frank E., Capt., 450 Sutter St., San Francisco.
Custer, Clarence P., Major, 408 E. Geary St., Stockton.
Hong, Charles J., Capt., 1602 North St., Bakersfield.
Hudson, Charles B., Major, Alameda County Hosp., Oakland.
Lamke, Charles M., Capt., 3706 Oakwood Pl., Riverside.
Layman, John D., Capt., 232 E. Cleveland Ave., Montebello.
Loutzenheiser, John J., Lt. Col., 8 16th Ave., San Francisco.
Mathewson, Carleton, Jr., Lt. Col., 3975 Clay, San Francisco.
Matson, James R., Major, 3604 Granada Ave., San Diego.
Meyer, Morton A., Major, 1373 3rd Ave., San Francisco.
Murphy, Morton J., Major, Redding.
Muskin, Nathan, Major, 420 S. Westlake Ave., Los Angeles.
Newbill, James, Capt., Santa Clara County Hosp., San Jose.
Northway, F. J., Capt., 2266 Vallejo St., San Francisco.
Pearson, Bruce R., Major, 330 E. Olive St., Turlock.
Pendleton, Waldo C., Capt., 727 W. 7th St., Los Angeles.
Richardson, William A., Major, 2010 Lilac Lane, Glendale.
Riechel, Leslie, Capt., 312 N. Boyle, Los Angeles.
Roath, Clinton A., Capt., 3945 Dublin St., Los Angeles.
Robbins, Wilfred T., Capt., Davis.
Rosenberg, Maurice W., Capt., 7022 Sunset Blvd., Los Angeles.
Schumacher, I. C., Lt. Col., 191 Wawona St., San Francisco.
Senter, Walter P., Major, 3119 Jackson St., San Francisco.
Sher, Benjamin H., Capt., 373½ Whittier Blvd., Los Angeles.
Short, John E., Capt., 3740 Northland Dr., Los Angeles.
Skaff, John E., Capt., 470 Columbus St., San Francisco.
Soto-Hall, Ralph, Lt. Col., 2445 Pacific Ave., San Francisco.
Starr, Berthold, 1st Lt., 233 13th St., Manhattan Beach.
Stohr, Vernon C., Major, 2701 14th Ave., Oakland.
Stephens, Stuart B., Capt., 1624 San Jose Ave., Alameda.
Von Dessonneck, Emil S., 1st Lt., 123 Edgewood, San Francisco.
Ward, Thomas A., Capt., 1130-A Slater St., Santa Rosa.
Warrick, Richard A., Capt., 4237 Fair Ave., North Hollywood.
Westphal, Edward A., Lt. Col., 157 S. Main St., Centerville.
Whitecloud, T. St. G., Capt., 618 Washington Ave., Pomona.
Whittaker, Thomas W., Capt., 1401 S. Hope St., Los Angeles.

Colorado

Gillaspie, John DeW., Capt., 721 Spruce St., Boulder.
Goen, Rayburne W., Major, 1130 Harrison St., Denver.
Gordon, Robert W., Lt. Col., 2051 Eudora St., Denver.
Huddleston, Ora L., Major, 1400 Cook St., Denver.
Kerr, David N., 1st Lt., 1058-13th St., Boulder.
Lipscomb, Wiiliam R., Lt. Col., 722 High St., Denver.
Pfile, Eugene F., Major, Trinidad.
Robinson, Murray E., Capt., 811 Mapleton, Burlington.

Connecticut

Balletto, Vincent, Capt., 535 Thompson Ave., East Haven.
Barber, Richard R., Capt., 125 Holmes Ave., Glenbrook.
Blumenthal, Edward J., Capt., 153 Division St., Ansonia.
Boyd, Robert B., Capt., 188 Long Hill Road, Wallingford.
Bruno, Joseph J., Capt., 505 Whalley Ave., New Haven.
Deming, Edward G., 1st Lt., 15 Bainbridge Rd., West Hartford.
Di Lorenzo, Albert T., Capt., 213 Easton Ave., Waterbury.
Friedman, Samuel, Capt., Fairfield State Hosp., Newtown.
Herrmann, Albert E., Lt. Col., 142 Robinwood Rd., Waterbury.
LaPierre, W. W., Capt., 431 Washington St., Norwichtown.
Littwin, R. J., Capt., Southbury Training School, Southbury.
Merriman, Henry, Capt., Watertown.
Rindge, Norman P., Capt., 20 Commerce St., Clinton.
Slater, Morris, Capt., 1100 Dixwell Ave., Hamden.
Stetson, Harold P., Capt., RFD 1, College Hgy., W. Cheshire.
White, Robert M., Major, 1995 Chapel St., New Haven.
Wiepert, William M., Major, PO Box E 5, Avon.

Delaware

Cannon, Norman L., 1st Lt., 1341 Gilpin Ave., Wilmington.
Davolos, Joseph J., Major, 1705 W. 4th St., Wilmington.
Giles, Junius A., Major, 806 Blakshire Rd., Wilmington.
Hudson, Floyd I., Major, Rehoboth Beach.
Scull, Carl B., Capt., 2 N. Bradford St., Dover.

District of Columbia

Farber, David J., Capt., 142 Upsal St., S.E., Washington.
Fischer, R. H., Capt., 1722 Varnum St., N.W., Washington.
Grass, Edward J., Col., 3700 Mass. Ave. N.W., Washington.
Miller, W. S., Major, 1131 W. Va. Ave., N.E., Washington.
Robins, Albert I., Capt., 1443 Kennedy St. N.W., Washington.
Tauber, Abraham, Capt., 534 Newcomb, S.E., Washington.

Florida

Elam, James O., Capt., 1481 N.W. 36th St., Miami.
Funkenstein, Dan H., 1st Lt., 2121 Redfern Rd., Jacksonville.
Goodwin, Hugh B. Jr., Major, 205 Arcarde Bldg., Ft. Pierce.
Hodson, Edward E., Capt., 661 N.W. 3rd St., Miami.
Ingram, Hollis C., Capt., 722 E. Concord, Orlando.
Oetjen, George F., Major, 211 E. Forsyth St., Jacksonville.

Georgia

Campbell, James L. Jr., Major, 1315 Fairview Rd. N.E., Atlanta.
Collins, Clyde M., Capt., 205 Green St., Gainesville.
Futch, Thomas A. Jr., Capt., 414 Upchurch Bldg., Thomasville.
Garner, Walter R., Lt. Col., 380 N. Green St., Gainesville.
Gibboney, Harry S. Jr., Capt., 80 Huntington Rd., Atlanta.
Herault, Pierre C. Jr., Major, 373 Ninth St. N.E., Atlanta.
Kilpatrick, Charles McC., Major, Forest Hills.
Leskin, Louis W., Capt., 710 E. 35th St., Savannah.
Moore, John W. Jr., Capt., 508 Union St., LaGrange.
Ricketson, Robert A. G., Capt., Broxton.
Rosenstock, Charles, Capt., 1126 St. Charles Pl., Atlanta.
Rumble, C. T., Capt., 352 Martin St., S.E., Apt. 688, Atlanta.
Seaman, Henry A., Lt. Col., 802 Brunel St., Waycross.
Wolff, Bernard P., Lt. Col., 48 Peachtree Pl., N.E., Atlanta.

Illinois

Allen, Robert A., Major, 1710 Orrington Ave., Evanston.
Anthony, Paul K., Capt., 6010 S. Ashland Ave., Chicago.
Arbogast, John L., Major, % Mrs. W. H. Arbogast, 211 W. Seminary, Bloomington.
Avakian, Vaughn A., Capt., 11006 S. Michigan Ave., Chicago.
Bowman, Harry R., Capt., 200 E. Bloomingdale Rd., Itasca.
Bowman, Howard O., Capt., San Jose.
Clark, Clif L., Capt., Onarga.
Collins, John J., Capt., 2100 Lincoln Park West, Chicago.
Drabanski, J. S., Capt., 6500 W. Irving Park Blvd., Chicago.
Ewald, William L., Capt., 2025 North Ave., Waukegan.
Fein, Harry S., Major, 1648 S. Springfield Ave., Chicago.
Feldman, Emanuel, Capt., Michael Reese Hosp., Chicago.
Field, Homer B., Major, 2376 E. 71st St., Chicago.
Fond, Israel, Capt., 4938 N. Washtenaw Ave., Chicago.
Frank, Louis S., Capt., 128 S. Central Ave., Chicago.
Grippe, William J., Capt., 619 N. Monticello Ave., Chicago.
Grzybowski, Stanley T., Capt., 5501 Cullom Ave., Chicago.
Hughes, Charles E., Capt., 4418 Parker Ave., Chicago.
Hurwitz, Ben L., Capt., 6329 Cuyler Ave., Chicago.
Hybke, Zenon S., Capt., 860 Bucklin St., LaSalle.
Judah, Leopold N., Capt., 510 S. Edwin St., Champaign.
Kleitsch, William P., Capt., 4210 N. Francisco Ave., Chicago.

PHYSICIANS SEPARATED FROM SERVICE

Illinois—Continued

Krakow, Clarence S., Capt., 1326 Lunt Ave., Chicago.
Lerner, David, Capt., 501 Surf St., Chicago.
Le Sage, Robert T., Capt., 227 W. Chamberlain, Dixon.
Levis, William P., Capt., 1845 S. Walnut St., Springfield.
Litterst, Lawrence J., Capt., 129 S. Eleanor Pl., Peoria.
McCuskey, John M., Major, 333 Fulton St., Peoria.
May, Percy C., Capt., 502 N. Locust St., Centralia.
Miller, Donald S., Major, 101 S. Parkside, Chicago.
Norbury, F. G., Col., Norbury Sanatorium, Jacksonville.
Olson, Elmer J., Capt., 731 E. 90th Pl., Chicago.
Parsons, Harold H., Capt., 2385 29th St., Moline.
Peterson, Paul G., Lt. Col., 8701 Rockefeller Ave., Hollywood.
Richmond, Samuel I., Capt., 224 N. Pine Ave., Chicago.
Roberts, Earl L., Capt., Cissna Park.
Roseborough, A. S., Capt., Woodland Lane, R.R. 4, Rockford.
Rosen, Davis, Capt., Marshall.
Rosenblum, Arthur H., Major, 7007 Oglesby Ave., Chicago.
Ross, Edward Y., Capt., Cabery.
Scott, Wilbert E. Jr., Major, 1117 N. Dearborn St., Chicago.
Sellett, Leonard V., Capt., 1368 Cartress St., LaSalle.
Shabat, Louis W., Capt., 6041 N. Talman Ave., Chicago.
Shapiro, Louis B., Major, Manteno State Hosp., Manteno.
Sharp, John R., Capt., West Madison St., Girard.
Soukup, Victor J., Capt., Chestnut.
Spellberg, Mitchell A., Major, 5240 Harper Ave., Chicago.
Spomer, John P., Capt., 822 E. 44th St., Chicago.
Stoll, John E., Major, 9 S. Kedzie Ave., Chicago.
Stotz, Kenneth F., Capt., 212 N. Latrobe Ave., Chicago.
Susser, Maxwell H., Capt., 1112 Pratt Blvd., Chicago.
Swan, Franklin D., Capt., Minonk.
Sweeney, Leo Patrick A., Col., 9453 S. Ashland Ave., Chicago.
Turner, Marion A., Capt., 302 S. Emma, Christopher.
Van Atta, Roger A., Capt., 539 2nd Ave., Ottawa.
Vorisek, Elmer A., Major, 1041 Lyman Ave., Oak Park.
Wall, Harry C., Capt., 8233 S. Marshfield, Chicago.
Weiler, Kenneth J., Capt., 2210 N. 77th Ct., Elmwood.
Young, James M., Capt., Orion.
Zelezinski, Leo A., Capt., 4728 S. Wolcott, Chicago.

Indiana

Balsbaugh, George K., Capt., 106 N. Elm St., North Manchester.
Barnett, Ernest R., Major, 1926 N. 8th St., Terre Haute.
Baskett, Russell J., Capt., 408 S. Main, Jonesboro.
Blatt, Adolph E., Capt., 2502 W. Michigan St., Indianapolis.
Bloom, Asa W., Major, 219 Spencer Ave., Marion.
Caplin, Samuel S., Capt., 228 44th St., Indianapolis.
Chattin, Vance J., Capt., 514 E. Main St., Washington.
Crandall, Martha L., Capt., 212 W. Pine St., Princeton.
Dickson, Dale D., Major, Letts.
Dillinger, George R., Major, 306 S. Maple St., French Lick.
Dodds, James U., Capt., 227 W. Main, Hartford City.
Fry, Robert DeV., Major, Hotel Harrison, Indianapolis.
Green, Geo. F., Lt. Col., 1515 E. Wayne St., S. Bend.
Greer, Oliver W., Col., 3050 Park Ave., Indianapolis.
Halleck, Harold J., Lt. Col., 417 S. Riverside Dr., Winamac.
Harden, Murray E., Capt., Covington.
Hattendorf, Anton P., Major, 4041 Old Mill Rd., Ft. Wayne.
Held, George A., Major, 1451 Mill St., Jasper.
Jones, Charles A., Capt., 397 N. Main, Franklin.
Kelly, Don E., Capt., 4927 Kenwood Ave., Indianapolis.
Kirtley, J. M., Major, 1101 W. Wabash Ave., Crawfordsville.
Kuhn, Raymond V., Capt., 1302 S. Henderson St., Bloomington.
Lamber, Chester K., Major, 3510 Guilford, Indianapolis.
Lane, William H., Capt., 125 W. Marion St., South Bend.
Millikan, William J., Capt., 2620 E. 59th St., Indianapolis.
Morrison, George G., Capt., 504 W. Race St., Portland.
Reed, Roger R., Capt., 205 W. 12th St., Anderson.
Sheek, Kenneth I., Capt., 491 Euclid St., Greenwood.
Test, Charles E., Major, 42 W. 43d St., Indianapolis.
Tipton, William R., Capt., 203 Northwood Blvd., Greencastle.
Toumey, Fred L., Capt., Indianapolis City Hosp., Indianapolis.
Warn, William J., Capt., Milan.
Yunker, Philip E., Major, 2418 Lincoln Ave., Evansville.
Zwick, Harold F., Major, 104 E. Rugg St., Decatur.

Iowa

Bezman, Harry S., Capt., Traer.
Bowers, Clifford V. B., Capt., 13½ Central Ave. N. W., Le Mars.
Chambers, J. W., Major, 1312 Equitable, 604 Locust, Des Moines.
Ganzhorn, Harold L., Capt., Mapleton.
Garlinghouse, Robert O., Lt. Col., State U., Hosp., Iowa City.
Gloeckler, B. B., Capt., 504 E. Washington St., Mt. Pleasant.
Gordon, Arnold M., Capt., 4406 Greenwood Dr., Des Moines.
Grossman, Milton D., Capt., 1715 Nebraska St., Sioux City.

Iowa—Continued

Healy, Maurice J., Capt., 1420 4th St., Boone.
Hill, Don E., Capt., 203 Tucker Bldg., Clinton.
Knoll, Albert H., Major, 909 Rhomberg Ave., Dubuque.
McGarvey, Neil J., 1st Lt., 1026 W. 4th St., Waterloo.
Shellito, John G., Capt., % Mrs. J. C. Shellito, Independence.
Smith, Robert A., Capt., Miners Hospital, Albia.
Trussell, Ray E., Major, 409 Grand Ave., Iowa City.
West, Alroy G., Capt., 169 Keeline Ave., Council Bluffs.
Weyer, Joseph J., Capt., Lohrville.
Wilke, Frank A., Capt., Woodward.

Kansas

Brethour, Leslie J., Capt., 636 W. 5th St., Junction City.
Cloyes, Arthur P., Major, 411 S. Denver St., El Dorado.
Griffin, Jack B., Major, 1321 Broadway, Leavenworth.
Gsell, George F., Major, 3707 Victor Pl., Wichita.
Hendrickson, George C., Lt. Col., Lebanon.
Horejsi, Alfred J., Capt., Ellsworth.
Hyndman, Henry H., Capt., 1042 Porter, Wichita.
Lee, George R., Capt., Yates Center.
Reeves, Eugene A., Capt., 1211 Hoel Parkway, Kansas City.
Scales, William McV., Major, 1920 N. Jefferson, Hutchinson.

Kentucky

Begley, Philip J., Capt., Hyden.
Bizot, William H., Capt., 3409 W. Broadway, Louisville.
Blackburn, Winfrey P., Lt. Col., Frankfort.
Brummett, Chester C., Capt., 304 N. 24th St., Middlesboro.
Cable, Thomas M., Capt., Fincastle.
Caldwell, Charles W. Jr., Capt., Danville.
Cox, David M., Lt. Col., 2701 Lexington Rd., Louisville.
Diacovo, Michael, Capt., 143 St. James St., Kingston.
Dillard, Harry K., Major, 1326 Winchester Ave., Ashland.
Goldstein, Joseph L., Major, 1932 W. Main St., Louisville.
Jones, Marshal M., Major, 425 Georgetown St., Lexington.
McLean, Charles G., Major, 220 Queenway Dr., Lexington.
Wheeler, Carl L. Jr., Capt., 326 Sycamore Rd., Lexington.
Williams, Walter F., Major, Mayo Arcade, Ashland.
Yancey, Charles R., Lt. Col., 206 W. 15th St., Hopkinsville.

Louisiana

Balding, Willard V., Capt., 6032 Patton, New Orleans.
Blandino, Vincent P., Capt., 5400 Gen. Diaz, New Orleans.
Boles, William M., Major, 1430 Tulane Ave., New Orleans.
Campbell, Edmond C., Capt., 320 N. 3d St., Monroe.
Cohen, Stanley, Lt. Col., 39 Papworth Ave., Metairie.
Gillaspie, Robert E., Capt., 35 Versailles Blvd., New Orleans.
Glassberg, E. J., Maj., 805 Pere Marquette Bldg., New Orleans.
Goldberg, Max M., Capt., 2300 Joseph St., New Orleans.
Hair, Morris J., Lt. Col., Lecompte.
Harlow, John R., Capt., Jonesboro.
Hood, Connie I. Jr., Capt., 1056 Prospect St., Shreveport.
King, Charles M. J., Capt., 105 Behan St., Nachitoches.
Lescale, Maurice, Major, 3514 Canal St., New Orleans.
Mullins, Julius H., Major, 2161 Wisteria St., Baton Rouge.
Schwarzenbach, M. P., Major, 307 Delaronde St., New Orleans.
Snatic, Harry S., Major, Route 3, Scafies Rd., Lake Charles.

Maine

Dunham, Carl E., Capt., 201 State St., Portland.
Gormley, Eugene G., Capt., Market St., Houlton.
Pomerleau, Rodolphe J. F., Capt., 13 Spring St., Waterville.
Thomas, William B. S., Major, Main St., Dover-Foxcroft.

Maryland

Delawter, DeWitt E., Capt., 29 W. Church St., Williamsport.
Ginsberg, Milton, Capt., Mt. Wilson Sanatorium, Mt. Wilson.
Lankford, Arthur Jr., Capt., 101 Upnor Rd., Baltimore.
Schenthal, J. E., Major, 4010 Liberty Hgts. Ave., Baltimore.
Shear, Meyer R., Capt., 2911 Spring Hill Ave., Baltimore.
Swiss, A. G., Capt., S. Baltimore G. H., 1213 Light, Baltimore.
Teitelbaum, Harry A., 1st Lt., 1411 Eutaw Pl., Baltimore.
Yeaman, John H., Capt., 239 Camden Ave., Salisbury.
Zimmerman, Loy M., Capt., 2858 Harford Rd., Baltimore.
Zupnik, Howard L., Major, 427 Hopkins Rd., Baltimore.

Massachusetts

Bozigian, Haig, Major, Somerville.
Bragger, James K., Lt. Col., 397 Newton St., Chestnut Hill.
Chafetz, Max, Capt., 116 Norfolk St., Dorchester.
Chamberlin, Donald T., Major, 605 Commonwealth Ave., Boston.
Cleary, Robert Vincent, Capt., 41 Pine St., Belmont.
Coen, William B., Capt., 57 Forest Park Ave., Springfield.
Colman, Joseph H., Capt., 39 S. Main St., Mansfield.
Corbin, George C., Capt., 34 Williams St., Roxbury.

PHYSICIANS SEPARATED FROM SERVICE

Massachusetts—Continued

Corson, Harold F., Lt. Col., Yale Hill Road, Stockbridge.
Cutler, E. C., Brig. Gen., Peter Bent Brigham Hosp., Boston.
Del Campo, Dante, Capt., 66 Rogers Ave., Lynn.
Desmond, Leo R., Major, 1272 Brook Rd., Milton.
Dutton, Robert, Major, 33 Avon St., Wakefield.
Feingold, Myer, Capt., 159 Salem St., Malden.
Garber, Jesse G., Capt., 26 Willow Crescent, Brookline.
Goldham, Herbert, Capt., 811 Western Ave., Lynn.
Gottschalk, R. G., 1st Lt., 103 Longwood Ave., Brookline.
Grafflin, Allan L., Lt. Col., 141 Longwood Ave., Brookline.
Hayes, Donald R., Major, Westfield State Sant., Westfield.
Hoffman, Alvin A., Capt., 115 Ormond St., Mattapan.
Holland, Robert M., Major, 1985 Centre St., West Roxbury.
Hunt, Sheldon L., Capt., Cape Cod, Cataumet.
Huntington, Benjamin L., Capt., 9 Gloucester St., Boston.
John, Ralph C., Major, Vet. Hospital, Rutland Heights.
Jordan, Frank J., Capt., 188 Pleasant St., Stoughton.
Kaplan, Daniel, 1st Lt., 1006 Pleasant St., Worcester.
Keedy, Christian, Capt., 119 Belmont St., Worcester.
Kelley, Thomas F., Capt., 104 Franklin St., Brookline.
King, Myron N., Capt., 10 King St., Dorchester.
Kowalski, Joseph V., Major, 67 South St., Ware.
Kreidberg, Marshall B., Capt., 68 Topliff St., Dorchester.
Kunkel, P., Major, 25 Shattuck St., Boston.
Lambert, Edward C., Capt., 97 Binney St., Boston.
Lanman, Thomas H., Col., 95 Suffolk Rd., Chestnut Hill.
Lanou, William W., Major, 44 Andover St., Pittsfield.
Levine, Samuel, Major, 40 Harwood St., Lynn.
Levine, Sidney A., Major, 406 Main St., Melrose.
Malewitz, Edward C., Capt., 330 Brookline Ave., Boston.
Park, Irving H., Capt., 677 Washington St., Brookline.
Petravice, Peter P., 1st Lt., 25 Burt St., Adams.
Ronka, E. K. F., Col., 46 S. Central Ave., Wollaston, Quincy.
Sands, Herman C., Capt., 8 Astoria St., Mattapan.
Seale, Earl S., Major, 108 Bay State Rd., Boston.
Sikorski, Stanley S., Capt., 121 Deane St., New Bedford.
Snow, Robert G., Capt., 25 Park Ave., Winchester.
Sullivan, Henry F., Capt., 144 Church St., Whitinsville.
Tate, John C., Major, 20 Maple St., Springfield.
Vernon, Hollis E., Major, Falmouth.
White, Samuel E., 1st Lt., 453 Railroad Ave., North Andover.
Yankopolus, Konstantine G., Capt., 31 Edna St., New Bedford.
Yee, Lester B. K., Major, Mass. Gen. Hosp., Boston.

Michigan

Beck, Karl H., Major, 11846 Wilshire, Detroit.
Beckwitt, Morris, Major, 1071 Van Dyke Ave., Detroit.
Blodgett, William H., Major, 2218 Iroquois Ave., Detroit.
Burnside, Howard B., Capt., 514 E. Kearsley St., Flint.
Cahalan, Joseph L., Capt., 2316 Biddle Ave., Wyandotte.
Carnes, Harry E., Major, 16935 Evanston, Detroit.
Carver, Gordon B., Capt., 401 N. Sherman St., Bay City.
Clinton, George R., Capt., 339 E. Oak St., Mason.
Clyne, Benjamin C., Capt., 363 Park Ave., Yale.
Davis, Lionel L., Capt., 220 N. Kinney, Mt. Pleasant.
Deurloo, Henry W., Capt., 130 Tillson St., Romeo.
Dick, Mark W., Major, 644 Plymouth Blvd., Grand Rapids.
Dillahunt, Jack A., Major, 1421 Delaware, Apt. 309, Detroit.
Eder, Joseph R., Capt., 1250 Chicago Blvd., Detroit.
Gaba, Howard B., Capt., 17300 Woodingham, Detroit.
Gilfillan, Edwin O., Major, 806 Court St., Sault Ste. Marie.
Gloss, Kenneth E., Major, 4412 Superior Ave., Crystal Falls.
Hendren, Owen S., Major, Williamston.
Holman, Herbert H., Major, 19985 Warrington Dr., Detroit.
Holst, John B., Major, 1023 Francis St., Jackson.
Hooker, Donald H., Major, 7424 Poe Ave., Detroit.
Kaleta, Edward J., Capt., 2216 Pierce, Flint.
Kerr, Howard J., Capt., 1441 Lake Shore Dr., Muskegon.
Lane, Sidney, Capt., Berrian Co. Hosp., Berrian Center.
La Rue, Robert E., Major, 7437 Churchill Ave., Detroit.
Lerner, David, Capt., Au Gres.
Luger, Frederick E., Capt., 2112 Gratiot Ave., Saginaw.
Lusk, Harry A., Major, 1450 Washington Heights, Ann Arbor.
Meade, Robert J., Capt., 810 Williams St., Jackson.
Mercer, Walter E., Capt., 909 Glenhaven, East Lansing.
Moe, Arnold S., Capt., 35104 Michigan Ave., Wayne.
Moleski, J. V., Capt., 306 Diamond Ave., N.E., Grand Rapids.
Podolsky, Harold M., Capt., 2053 Pingree Ave., Detroit.
Ragne, Paul O., Major, 302 Jackson St., Manchester.
Rigterink, Gerald H., Capt., 2424 S. Park St., Kalamazoo.
Root, Charles T., Major, 90 Collingwood Ave., Detroit.
Rosen, Isadore I., Capt., L'Anse.

Michigan—Continued

Rosenthal, Louis H., 1st Lt., 2509 Blaine, Detroit.
Rosenthal, Samuel, Capt., 4268 Buena Vista, Detroit.
Slagh, Milton E., Capt., Box 265, Saranac.
Sofen, Morris B., Capt., 715 Montrose, Kalamazoo.
Somers, D. C., Major, 362 McKinley, Grosse Pointe Farms, Grosse Pointe.
Strand, Martin E., Capt., 3330 Wiscasset, Dearborn.
Summers, William A., Capt., 15035 Grandview Ave., Detroit.
Waldron, Alexander M., Major, 1701 Hill St., Ann Arbor.

Minnesota

Balfour, William M., Major, 810 10th St., S. W., Rochester.
Benton, Jaul C., Major, Gibbon.
Bowers, Robert N., Capt., Lake City.
Bradshaw, F. J. Jr., Lt. Col., 105 Wilson Ave. S. E., St. Cloud.
Brown, Philip W., Lt. Col., 729 6th St. S. W., Rochester.
Campbell, Donald C., Capt., 327 14th Ave. S.W., Rochester.
Clarke, James Y. Jr., Capt., 818 Curfew Ave., St. Paul.
Closuit, Frederick C., Major, 371 Wilson St., Winona.
Drexler, George W., Capt., Long Prairie.
Frisch, David C., Capt., 241 Jackson St., Anoka.
Hall, George H. Jr., Major, 4908 2nd Ave. S., Minneapolis.
Hart, Vernon L., Lt. Col., 2507 Lake Pl., Minneapolis.
Hogan, Clifford W., Capt., Kensington.
Hoyer, Ludolf J., Capt., Windom.
Johnson, Malcolm R., Lt. Col., 311 Pine St., Red Wing.
Kanealy, John F., Capt., 2908 45th Ave. S., Minneapolis.
Lillehei, Clarence W., Major, 4601 Wooddale Ave., Minneapolis.
Milnar, Frank J., Capt., 412 Otis Ave., St. Paul.
Strom, Gordon W., Major, % Mayo Clinic, Rochester.
Trow, James E., Capt., 6 E. Diamond Lake Rd., Minneapolis.
Vadheim, Lewis A., Capt., Tyler.
Willson, Donald M., Capt., 1508 1st St., N.W., Rochester.
Wise, Ralph W. E., Major, Mayo Clinic, Rochester.
Wold, Lester E., Capt., 1417 W. Center St., Rochester.
Younger, Lewis I., Capt., 269 Winona St., Winona.

Mississippi

Bush, Eugene A., Major, 15th St., P. O. Box 567, Laurel.
Curry, Hugh K., Capt., Eupora.
Dorris, Henry C., Lt. Col., Winona.
Ellison, Eugene T., Capt., 613 Moore St., Greenville.
Goodman, Sanders A., Major, 209 Arnold Ave., Greenville.
Ross, Theophilus E., Lt. Col., 416 Bay St., Hattiesburg.

Missouri

Cope, Josef S., Lt. Col., 128 S. 11th, Lexington.
Frerking, Herbert W., Capt., Alma.
Glaser, Joseph L., Capt., 7042 Maryland Ave., St. Louis.
Goodman, LeRoy, Major, 700 Ward Pkwy., Kansas City.
Griffith, George W., Capt., Garden City.
Huber, Tyron E., Lt. Col., 3616 Castleman, St. Louis.
Kallenbach, Glen P., Capt., Washington Univ., St. Louis.
Kelley, Robert W., Major, 4961 Laclede, St. Louis.
Kirtz, Louis P., Capt., 3866 S. Spring, St. Louis.
Kotner, Irvin A., Capt., 5630 Pershing, Apt. 404, St. Louis.
Kranson, Seymour J., Major, 604 W. Maple Ave., Independence.
Krebs, Joseph M., Capt., 1325 S. Grand Blvd., St. Louis.
LaForce, Richard F., Major, 1127 S. Garrison, Carthage.
Marks, Mark M., Capt., 5217 Charlotte St., Kansas City.
Mohr, George D., Capt., St. Mary's Hospital, St. Louis.
O'Reilly, Daniel E., Capt., 6369 Pershing Ave., University City.
Powers, John R., Lt. Col., St. Louis Children's Hosp., St. Louis.
Robinson, Joseph, Capt., 3651 Blaine St., St. Louis.
Siceluff, Joseph G., Capt., 200 E. Pershing, Springfield.
Smith, Dudley R., Major, 834 N. Biltmore, Clayton.
Tillman, W. W. Jr., 1st Lt., 4462 Forest Park Ave., St. Louis.
Vandiver, Virgil D., Capt., Chillicothe.
Williams, Bill H., Capt., Joplin.

Montana

Biehn, Ralph H., Capt., 1133 N. 29th St., Billings.
Brooke, Charles P., Capt., Harrison.
Campbell, Robert M., Major, 612 N. Benton Ave., Helena.
Morrison, James D., Capt., 622 N. 29th St., Billings.

Nebraska

Brazer, John G., Major, 1809½ N. 49th Ave., Omaha.
Deakin, Thomas W., Major, 216 S. 41st St., Omaha.
Johnson, Robert W., Major, 1818 S. 23d St., Lincoln.
Ketter, William D., Major, 2019 Lane St., Falls City.
Kilgore, William S., Major, 915 Blackburn Ave., York.
Kruml, Joseph G., Lt. Col., Ord.
Shreck, Horace W., Lt. Col., N. 5 Park Dr., Holdredge.

PHYSICIANS SEPARATED FROM SERVICE

Nebraska—Continued

Trobough, George E., Lt. Col., 2236 Jones St., Omaha.
White, Charles M., Capt., Sutherland.
Wyrens, Raymond J., Major, 2001 N. 55th St., Omaha.

Nevada

Cantlon, Edwin L., Major, 329 7th St., Sparks.

New Hampshire

Branson, John H. Jr., Major, St. Paul's School, Concord.
Bremner, Robert M., Major, 106 Notre Dame Ave., Manchester.
Lavoie, Lionel D., Capt., 1235 Elm St., Manchester.
Mulaire, Victor J., Capt., Highland St., Hooksett.

New Jersey

Austin, Thomas R., Capt., 4 Tulip St., Cranford.
Black, Maskell B., Capt., 128 E. High St., Glassboro.
Branon, Mark E., Capt., 16 W. Passaic Ave., Rutherford.
Christoph, Francis T., Major, 483 Prospect St., Maplewood.
Conan, Neal J. Jr., 1st Lt., 6 Apollo St., Jersey City.
Cornwell, Alfred L., Capt., 265 N. Laurel St., Bridgeton.
Cox, Jack E., Capt., 16 Cambridge Rd., Westmont.
D'Imperio, Francesco, Capt., 411 Cooper St., Camden.
Fitzhugh, William F., Major, 190 Euclid Ave., Ridgefield Park.
Gilson, Benjamin I., Capt., 1395 E. 19th St., Brooklyn.
Golden, William M., Capt., 236 W. Milton Ave., Rahway.
Gutmann, Erwin K., Major, 3258 Hudson Blvd., Jersey City.
Heminway, Norman L., Col., 40 Grove St., Somerville.
Hirsch, Solomon, Capt., 109 Van Wagenen Ave., Jersey City.
Knapp, William A., Capt., 152 Halstead St., East Orange.
Kupper, William H., 1st Lt., 275 Paulison Ave., Passaic.
Loder, Horace B., Capt., 225 E. Commerce St., Bridgeton.
Mandel, Sidney N., 1st Lt., 107 33d St., Union City.
Martin, Theodore, Capt., 577 Lincoln Ave., Glen Rock.
Murphy, George E., Major, 197 Paxton St., Paterson.
Nathanson, Norman, Major, 179 Broadway, Long Branch.
Notkin, Meyer, Major, 559 Broadway, Paterson.
Piasecki, Chester A., Capt., 741 E. 23rd St., Paterson.
Pinto, Joseph A., Capt., 50 N. 11th St., Newark.
Probst, Everett W., Major, 14 E. Park Pl., Rutherford.
Schirber, Rene G., Capt., 11 Kirkpatrick St., New Brunswick.
Santangelo, Vito F., Capt., 20 King St., New York.
Sherman, Samuel H., Major, 81 Elmora Ave., Elizabeth.
Simeone, Peter A., Capt., 138 Clerk St., Jersey City.
Spivack, David, Capt., 315 W. Jersey St., Elizabeth.
Stanford, Henry J., Major, 1 Broad Parkway, White Plains.
Stein, Joseph M., Lt. Col., 404 Boyd St., Camden.
Sufrin, Emanuel, Major, 119 N. 27th St., Camden.
Svenson, Sven E., Capt., 515 Sanford Ave., Newark.
Weeks, Belford A., Capt., 534 S. Shore Rd., Absecon.
Weiss, Alvah M., Major, 14 Craig Pl., North Plainfield.
Wentzell, James E., Lt. Col., 5 E. Mantua Ave., Wenonah.
Western, Frederic B., Capt., Knollwood Rd., Short Hills.
Wiren, William E., Capt., 105 W. 8th St., Bayonne.
Wurzel, Milton, Capt., 295 Hunterdon St., Newark.

New Mexico

Evans, Leland S., Major, 1020 Hess Terr., Las Cruces.
Follingstad, Alvin H., Capt., Springer.
Glasier, William A., Lt. Col., 612 Riverside Dr., Carlsbad.
January, Harold L., Lt. Col., 215 S. Richmond, Albuquerque.
Lander, Ernest W., Capt., 208 S. Missouri, Roswell.

New York

Altieri, Anthony J., Capt., 2279 University Ave., New York.
Altman, Harold, Capt., 565 W. End Ave., New York.
Amar, Dolores B., Capt., RFD 1, Box 493A, Seaford.
Amidon, Blaine F. Jr., Capt., 113 West Ave., East Syracuse.
Andolina, Carmelo T., Capt., 78 N. Main St., Mount Morris.
Andronaco, Joseph M., Capt., 131 Riverside Dr., New York.
Angelo, Charles A., Major, Madison Park Hosp., Brooklyn.
Anker, Frank, Capt., 1402 Avenue K, Brooklyn.
Arak, Charles, Capt., 3121 54th St., Woodside, L. I.
Artsis, Nathan, Major, Bellmore Ave., North Bellmore.
Avin, J. Capt., Hotel Beacon, 75th & Broadway, New York.
Blick, Michael S., Major, 29 W. 64th St., New York.
Blier, Julius S., Capt., 555 Crown St., Brooklyn.
Bluestone, Leon, Capt., 1721 Bath Ave., Brooklyn.
Cardany, George Jr., Capt., 2 Couch St., Plattsburg.
Carruthers, Roderick J., Capt., RFD 3, Syracuse
Castrovinci, Frederick, Capt., 3357 75th St., Jackson Heights.
Cavuoti, Michael A., Capt., Northern Blvd., Greenvale, L. I.
Charlton, George P., Capt., 1391 Madison Ave., New York.
Cheifitz, Abraham, Capt., 709 Van Siclen Ave., Brooklyn.
Clements, James J., Capt., 322 Lake Ave., Rochester.

New York—Continued

Codik, John G., Capt., 464 E. 159th St., New York.
Cohen, Harold, Capt., 648 Empire Blvd., Brooklyn.
Cohen, Max M., Major, 8735 Bay Parkway, Brooklyn.
Coletti, Cataldo J., Capt., 601 W. 174th St., New York.
Collins, Vincent P., Capt., 630 W. 168th St., New York.
Colmore, Henry P., Lt. Col., Byram Lake Rd., Mt. Kisco.
Conti, Vincent S., Capt., 2137 83d St., Brooklyn.
Coppersmith, Harold H., Capt., 1535 E. 18th St., Brooklyn.
Cornacchia, Louis T., Capt., 7010 Seminole Ave., Forest Hills.
Cowen, Mortimer I., Lt. Col., 811 Cortelyou Rd., Brooklyn.
Coyle, Francis R., Lt. Col., 472 Woodward Ave., Buffalo.
Cramer, Arthur J. Jr., Capt., 864 Colvin Ave., Kenmore.
Cudmore, John T. P., 1st Lt., 216 E. 39th St., New York.
Cushing, V. D., Capt., U. Hosp. of the Good Shepherd, Syracuse.
Cutler, Condict W. Jr., Col., 135 W. 76th St., New York.
Cymerman, Henry, Capt., 258 McKinley Ave., Brooklyn.
Cytryn, Max E., Capt., 4309 40th St., Long Island City.
Degan, John A. Jr., Capt., 1515 Genesee St., Utica.
De Hoff, John B., Capt., 299 Riverside Dr., 4 A, New York.
Derrico, Nicholas, Capt., 1957 Ellis Ave., Bronx.
De Vita, Joseph R., Capt., 213 Adelphi St., Brooklyn.
Diamond, Sidney, Capt., 164-16 89th Ave., Jamaica.
Dodge, Lynn Q., Major, 11 Pleasant St., Fairport.
Donald, Howard A., Major, 122-21 142d Pl., South Ozone Park.
Dunne, Lawrence J., Capt., 150 S. Middle Neck Rd., Great Neck.
Elder, Charles K., Major, RD 5, Oswego.
Farber, Harry, Major, 201 Foster Ave., Brooklyn.
Fenton, Alan H., Capt., 80 Elwood Ave., Mt. Vernon.
Ferber, D. M., Capt., Hudson River State Hosp., Poughkeepsie.
Ferrer, Jose M. Jr., Major, 1075 Park Ave., New York.
Fischer, Irving C., Capt., 239 Central Park West, New York.
Fishbein, Herbert A., Capt., 2626 King's Highway, Brooklyn.
Fisher, Wilbur J., Major, 130 Colvin Ave., Buffalo.
Forman, Charles, Capt., RD 2, Box 111, Catskill.
Forst, Arthur, Capt., 550 W. 157th St., New York.
Francomano, Pasquale J., Capt., 763 E. 224th St., New York.
Frank, David L., Capt., 133-28 226th St., Laurelton, L. I.
Freiman, Israel S., Capt., 230 W. 79th St., New York.
Friedman, Gerald J., Major, 773 E. 176th St., New York.
Glasser, Sidney M., Capt., 234 Greenwich St., Hempstead.
Goldberg, Bernard, Capt., 235 Larchmont Ave., Larchmont.
Greenberg, Morris E., Capt., 269 Graham Ave., Brooklyn.
Gruenbaum, Max, Capt., 3875 Waldo Ave., Bronx.
Gureasko, Henry J., Capt., 1780 E. 13th St., Brooklyn.
Gutman, Eleanor B., Capt., 48 W. 85th St., New York.
Harris, Lloyd D., Major, 16 Garfield Pl., Poughkeepsie.
Hauer, Emanuel, Capt., 200 E. 16th St., New York.
Hauptmann, David M., 1st Lt., 54 E. 176th St., Bronx.
Healy, Thomas M., 1st Lt., 35 Wendover Rd., Yonkers.
Heenan, Edmund R., Capt., 3 Clydon Rd., Garden City, L. I.
Hendricks, Robert T., Capt., 129 Lexington Ave., New York.
Hitschmann, Otto B., Capt., 112 W. 86th St., New York.
Howe, Martha E., Capt., 901 Lexington Ave., New York.
Humphreys, Gustavus A., Major, 310 E. 75th St., New York.
Husser, Horace F., Capt., 18 Cruser Pl., Rockville Center.
Inciardi, James A., Major, 2415 Beverly Rd., Brooklyn.
Itkin, Irving H., Capt., Mt. Sinai Hosp., New York.
Jacobson, Morton A., Capt., 97 Bruce Ave., Yonkers.
Janowsky, C. C., Major, 221-12 Hartland Ave., Queens Village.
Jason, Alvin D., Major, 1 W. 74th St., New York.
Juchli, Rene H., Lt. Col., 175 Guy Park Ave., Amsterdam.
Kaplan, Henry J., Capt., 18 S. Main St., Spring Valley.
Kastoff, David, 1st Lt., 85 McClellan St., New York.
Katz, Jacob F., Major, 110 W. 94th St., New York.
Kay, Saul, Capt., 1318 Franklin Ave., Bronx.
Kernan, Francis M., Major, 150 E. 50th St., New York.
Kilmann, Martin, Capt., 522 W. End Ave., New York.
Kleefield, Elmer A., Major, 108-33 71 Ave., Forest Hill.
Kreuz, Paul J., Capt., 1044 Kenmore Ave., Buffalo.
Kroff, William, Capt., 222 E. 32nd St., New York.
Leass, Reuben, Capt., 34-19 Edgemere Ave., Edgemere.
Lee, James T., 1st Lt., 622 W. 168th St., New York.
Leigh, Ted F., Major, 400 E. 50th St., New York.
Leuthner, John G., Capt., 2305 University Ave., Bronx.
Levine, David, Major, 1741 Union St., Brooklyn.
Levy, Harold H., Capt., 246 W. End Ave., New York.
Levy, Joseph, Capt., 232 Oxford Rd., New Rochelle.
Lewis, Benjamin, Capt., 5 Grand Blvd., Binghamton.
Libin, Isaiah E., Capt., 1855 Monroe Ave., New York.
Lipson, Milton, Capt., 5 Main St., Ft. Plain.
London, Daniel, Capt., 2375 Ocean Ave., Brooklyn.
Lowenthal, Milton, Major, 321 E. 17th St., New York.
Lozner, Joseph, Capt., 3065 Grand Concourse, New York.
Magocsi, Alexander W., Capt., 1906 Ditmare Blvd., Astoria.

PHYSICIANS SEPARATED FROM SERVICE

New York—Continued

Mandelbaum, Joseph, Capt., 258 Henry St., Brooklyn.
Mangiardi, Joseph L., Capt., 103-25 123 St., Richmond Hill.
Mann, Jay D., Major, 1084 Madison Ave., Albany.
Manuta, Carl, Capt., 1341 54th St., Brooklyn.
Margulies, Harry L., Capt., 2039 Gleason Ave., Bronx.
Melant, Joseph H., 1st Lt., 1247 Electric Ave., Lackawanna.
Meyer, Harry, Capt., 27 Ludlow St., Yonkers.
Miller, Leo R., Lt. Col., 145 Vermilyea Ave., New York.
Moran, Charles E., Major, 1866 Niagara Ave., Niagara Falls.
Moskowitz, Harry, Capt., 4100 43rd Ave., Long Island City.
Mulholland, Herbert F., Major, 536 B 22d St., Far Rockaway.
Muller, Harold G., Capt., Main St., Cato.
Neidich, Ezra K., 1st Lt., Yonkers.
Nemiroff, Israel, Capt., 4402 12th Ave., Brooklyn.
Nenner, George, Capt., 1816 Harrison Ave., Bronx.
Neuhardt. Charles W., Capt., 108-38 70th Ave., Forest Hills.
Neuren, Emanuel A., Capt., 299 Crown St., Brooklyn.
Newbold, Robson S., Capt., 94 Woodlawn Ave., New Rochelle.
Newman, Charles M., Capt., 209 Bay 34th St., Brooklyn.
Newman, Louis I., Capt., 133-01 230th St., Laurelton.
Nichols, Leonard E., Capt., 1301 N. Salina St., Syracuse.
Northrup, Robert R., Capt., 56 N. Protage St., Westfield.
Owens, William W., Capt., 175 Garfield Pl., Brooklyn
Palmer, James N., Capt., 1213 Court St., Utica.
Patterson, Donald S., Major, Kings County Hosp., Brooklyn.
Phillies, Eustace G., Capt., 204 Hodge Ave., Buffalo.
Pickar, Gabriel, Capt., 1700 President St., Brooklyn.
Pool, James L., Major, 535 E. 72d St., New York.
Prowda, Theodore J., Major, 475 Sherrill Rd., Sherrill.
Pruce, Arthur M., Capt., 7920 4th Ave., Brooklyn.
Puerner, Joseph W., Major, 332 Walden Ave., Buffalo.
Rappoport, Arthur E., Major, 26 E. Ave., Caledonia.
Reese, Paul H., Capt., 352 Senator St., Brooklyn.
Reitz, Russell E., Capt., 1048 E. Ferry St., Buffalo.
Rennie, William, Major, 684 Linwood Ave., Buffalo.
Ricklin, Joseph, Capt., 581 Powell St., Brooklyn.
Robertelli, Henry C., Capt., 8524 10th Ave., Brooklyn.
Robinson, John W., Capt., 18 Woodworth Ave., Yonkers.
Romano, Paul S., Capt., 2550 University Ave., Bronx.
Rosen, Frank L., 1st Lt., 670 W. End Ave., New York.
Rosenberg, Meyer, Capt., 7040 Colonial Rd., Brooklyn.
Rosenfeld, Herbert, Capt., 139-67 Pershing Crescent, Jamaica.
Rothman, Herman, Capt., 79 Rhodes St., New Rochelle.
Rowe, Percy S., Major, 192-63 Hollis Ave., Hollis.
Rubenstein, George, Capt., 425 Swan St., Dunkirk.
Rudnick, Julius, Major, 260 E. 91st St., Brooklyn.
Ryan, Arland D., Capt., Sodus.
Sampliner, Robert B., Capt., Bellevue Hospital, New York.
Schmoyer, Sheron A. A., Capt., 461 Riverdille Ave., Yonkers.
Schonberger, Joseph W., Capt., 163 E. Boardwalk, Long Beach.
Schultze, Paul Jr., Major, 339 State St., Albany.
Schuyler, James B., Capt., 308 New Scotland Ave., Albany.
Schwartz, Murray N., Capt., 1158 Boynton Ave., New York.
Secor, Ralph C., Capt., 151 Benson St., Albany.
Seidemann, Irving, Major, 1480 Popham Ave., Bronx.
Seiffer, Bertram H., 1st Lt., 1362 Grand Concourse, New York.
Sergis, Mooshy, Capt., 1326 Riverside Dr., New York.
Settineri, John, Capt., 192 Fall St., Seneca Falls.
Sherman, Joseph, Capt., 3 Butler Ave., Buffalo.
Sherman, William B., Lt. Col., 60 E. 58th St., New York.
Shiner, Irving S., Major, 884 W. End Ave., New York.
Shnayerson, Edward F., Capt., 659 Linden Blvd., Brooklyn.
Shulman, Bernard H., Major, 1239 Avenue S, Brooklyn.
Silberstein, Edward L., Capt., 4901 14tlr Ave., Brooklyn.
Singer, Max, Capt., 2545 Valentine Ave., New York.
Sisca, Anthony V., Major, 237 Purchase St., Rye.
Sklar, Leo J., Capt., 2230 Cornaga Ave., Far Rockaway.
Skyer, Joseph R., 1st Lt., 877 Broadway, Newburgh.
Smith, George Y., Capt., 1751 67th St., Brooklyn.
Sohn, Louis, Capt., 456 E. 3d St., Brooklyn.
Soloway, David, Capt., 84 Eastern Ave., Ballston Spa.
Soltz, William B., 1st Lt., 1171 Elder Ave., Bronx.
Spector, Frederick, Major, 473 Eastern Parkway, Brooklyn.
Speer, Charles A., Capt., 5 Prospect Pl., New York.
Spinelli, Anthony N., Capt., 309 E. 116th St., New York.
Stacy, Harold G., Capt., 2133 70th St., Brooklyn.
Stahl, Albert E., Capt., 188-01 Liberty Ave., Hollis, L. I.
Stein, Benjamin M., Major, 465 Fulton Ave., Hempstead.
Stein, Hymen D., Capt., 69-10 Yellowstone Blvd., Forest Hills.
Stern, Edward A., Capt., 1501 E. Ave., Rochester.
Stern, Eli J., Lt. Col., 317 W. 93rd St., New York.
Stiefel, Frederick H., Major, 1900 Quentin Rd., Brooklyn.
Stillman, Sylvan M., Capt., 110 Riverside Dr., New York.

New York—Continued

Stone, Neil C., Lt. Col., 69 Montgomery St., Poughkeepsie.
Sulmonetti, William B., Lt. Col., 1815 Palmer Ave., Larchmont.
Tarr, Leonard, Major, 144 E. 90th St., New York.
Taylor, Earl S., Major, 1435 Lexington Ave., New York.
Thomas, Lowell I., Lt. Col., 5101 39th Ave., Long Island City.
Tollefsen, Harry R., Major, 1410 York Ave., New York.
Tompkins, Victor N., Major, 516 Madison Ave., Albany.
Trick, Harold W., Capt., 80 John St., Akron.
Turner, Thomas E., Capt., 104 Ashworth Pl., Syracuse.
Udkow, Samuel, Capt., 1134 W. Farms Rd., Bronx.
Van Slyke, Karl K., Capt., 21 Sycamore St., Bronxville.
Veremakis, Constantine, Capt., 32-62 61st St., Woodside.
Vitelli, Joseph A., 1st Lt., 243 Nassau St., Brooklyn.
Vogel, Sidney, Capt., 87 Grand St., Croton-on-Hudson.
Vorisek, Robert E., Capt., 660 W. 180 St., New York.
Walsh, J. S., Maj., Saratoga Inn, Broadway, Saratoga Springs.
Weaver, William J. Jr., Capt., 14 Adams Pl., Delmar.
Wechsler, Herman, Capt., 2865 University Ave., Bronx.
Weinberg, Marvin, Capt., 174 Waverly Pl., New York.
Weinberg, Milton S., Capt., 80-03 192nd St., Jamaica.
Weingarten, Milton F., Capt., 65 E. 96th St., New York.
Weisman, Joseph C., Major, 109 80th Rd., Kew Gardens.
Weiss, Samuel A., Lt. Col., 1109 Park Pl., Brooklyn.
Weseley, Harry B., Capt., 902 Lincoln Pl., Brooklyn.
Wessell, Elmer, Capt., Point View Terr., Plattsburgh.
Wetrich, Raymond M., Capt., 26 VanCott Ave., Hempstead.
Wheeling, Kenneth J., Capt., 15 E. Main St., Port Jervis.
Widmann, Marcus, Capt., 1448 Vyse Ave., Bronx.
Wing, Wilson M., Major, 16 E. 11th St., New York.
Wohl, Charles S., Capt., 46 Linden Blvd., Brooklyn.
Wolf, Stewart G. Jr., Major, 525 E. 68th St., New York.
Wolgel, Milton I., Capt., 124 E. 176th St., Bronx.
Woodrow, Jack H., Major, 80 Hilltop Acres, Yonkers.
Yasser, Isidore, Capt., 1945 Davidson Ave., Bronx.
Zaino, Costantino, Capt., 309 Bedford Park Blvd., Bronx.
Zeichner, Sidney, Capt., 181 Rockway Parkway, Brooklyn.
Zeilengold, Milton, Capt., 440 E. 138th St., New York.

North Carolina

Cloninger, Kenneth L., Major, Conover.
Cogdell, David M., Lt. Col., 230 Old St., Fayetteville.
Currie, Daniel S. Jr., Col., Parkton.
Dorsett, Fletcher I., Capt., 417 Julian Ave., Thomasville.
Duck, Walter O., Capt., Asheville.
Goley, Willard C., Col., Graham.
Griggs, Boyce P., Capt., 2108 Vail Ave., Charlotte.
Hammond, Alfred F., Capt., Grifton.
Harmon, Raymond H., Major, Boone.
Henry, Hector H., Major, Court House, Durham Health Dept., Durham.
Horack, Harold M., Major, 2021 Sprunt St., Durham.
Hunter, William B., Major, Lillington.
Plummer, David E., Lt. Col., 1102 Virginia Ave., Durham.
Rosenbaum, Maurice M., Major, Shallotte.
Summers, John D., Capt., Route 6, Statesville.
Wall, George R., Capt., Siler City.
Wall, R. L. Jr., Capt., 2208 Buena Vista Rd., Winston-Salem.
Wilkins, Gordon M., Major, 105 E. Bright St., Kingston.

North Dakota

Griffin, Vernon M., Major, 302 S. 4th St., Grand Forks.
Hawn, Hugh W., Major, 126 S. 9th St., Fargo.

Ohio

Allen, Samuel, Capt., 733 Bradshaw Ave., East Liverpool.
Amstutz, Hubert M., Major, 132 N. High St., Lancaster.
Anzinger, Frank W., Capt., 621 S. Tanglewood Dr., Springfield.
Arons, Abraham, Capt., 7729 Superior Ave., Cleveland.
Ash, Clarence E., Major, Route 2, Marietta.
Atkinson, W. H. Jr., Capt., 1035 Harmony St., Youngstown.
Bean, William B., Major, General Hosp., Cincinnati.
Buchman, Joseph A., Major, 3314 Elland Ave., Cincinnati.
Chambers, William R., Capt., 7255 Reading Rd., Cincinnati.
Cowdery, Kenneth H., Capt., Chaska Beach, Huron.
Creamer, David M., 1st Lt., 3706 Tallman Ave., Bellaire.
Cress, Orlando E., Capt., 626 S. Elm, Van Wert.
Crone, P. C., Major, 4111 W. 189th, Fairview Village, Cleveland.
Englander, Howard H., Capt., 1088 Carlyon Rd., East Cleveland.
Ferguson, Edward E., Major, 93d at Euclid, Cleveland.
Finkelmeier, Louis J., Capt., 3497 Fine St., Cincinnati.
Fusco, Patrick J., Major, 322 Genesee Ave., Warren.

PHYSICIANS SEPARATED FROM SERVICE

Ohio—Continued

Gitman, William H., Capt., 1108 Salem Ave., Dayton.
Goetz, John P., Capt., 26 Dodge Ave., Akron.
Graham, John H., Capt., RFD 2, Brunswick.
Guarnieri, Frank G., Capt., 315 Fairmont, Warren.
Hamilton, Gerald W., Capt., 759 Perkins Park Dr., Akron.
Hazel, Woodrow S., Capt., 2556 McGuffey Rd., Youngstown.
Johnston, Robert L., Major, 3847 Superior Ave., Silverton.
Jones, Paul H., Lt. Col., Stockdale.
Kalmon, Morris, Major, 46 Aqueduct St., Akron.
Kelker, John R., Major, 19242 Coffinberry Blvd., Fairview.
King, Harry E., Major, 60 Wyoming St., Dayton.
Ley, Gordon R., Capt., RFD 2, Middle Point.
McCormick, James E., Major, 461 Luck Ave., Zanesville.
McGraw, Elmer A., Capt., 311 Main St., Toronto.
McKinley, Charles E., Major, 47 N. Main St., Camden.
Messina, John, Capt., 8217 Rosewood Ave., Cleveland.
Miller, Frederick H., Lt. Col., 118 Rockwood Ave., Dayton.
Miller, Ralph H., Major, 6257 Roger's Park Pl., Cincinnati.
Mohr, Truman J., Major, 228 Mill St., Lockland.
Moorman, Thomas A., Capt., 627 Kenwood Ave., Dayton.
Morgan, Chester A., Capt., 333 N. Jefferson St., Van Wert.
Mutschmann, Paul N., Lt. Col., 1180 Maywood Ave., Warren.
Newport, Norsuda M., Major, 807 Laurel Ave., Zanesville.
Piser, Alfred L., Capt., 519 W. Norman Ave., Dayton.
Radecki, Joseph A., Capt., 2842 Elm St., Toledo.
Roszmann, Marvin H., Capt., RFD 1, Morral.
Sharon, Isadore C., Capt., 3846 Reading Rd., Cincinnati.
Sherrer, Edward L., Lt. Col., 20070 Frazier Dr., Rocky River.
Slomer, Norbert F., Capt., 524 Ludlow Ave., Cincinnati.
Snyder, Robert D., Lt. Col., 252 Hadley Ave., Dayton.
Speier, Aaron S., Capt., 2245 Emerson Ave., Dayton.
Sperry, Donald R., Capt., 124 N. 33rd St., Newark.
Staton, Harvey J., Capt., 133 E. Central Ave., West Carrollton.
Stephens, Vernon D., Major, 70 W. Woodruff Ave., Columbus.
Wayman, Thomas B., Major, 3578 Monteith Ave., Cincinnati.
Weller, Lawrence W., Capt., 427 Madera Ave., Youngstown.
Wellmeier, Hugh, Major, 412 N. Wayne St., Piqua.
Wilcoxon, George M., Capt., 2121 Shunk Ave., Alliance.
Wilderom, Morris, Capt., 603 E. Liberty St., Medina.
Willis, Willis H., Col., 227 Liberty St., Painesville.

Oklahoma

Bohlman, Wilbur F., Capt., 821 N. Noble, Watonga.
Bush, Jordan M., Capt., 827 N. E. 20th, Oklahoma City.
Donovan, Mark H., Capt., 1213 N.W. 38th St., Oklahoma City.
Hughes, Horton E., Major, 15 E. Drummond, Shawnee.
Kennedy, Virgil N., Major, 106½ S. Main, Newkirk.
Kernek, Clyde, Lt. Col., 210 N. Gulf St., Holdenville.
Lindsey, Ray H., Capt., 722 N. Ash St., Pauls Valley.
Lindstrom, W. C., Lt. Col., 119 N. Broadway, Oklahoma City.
Little, John R., Major, 701 N.W. 40th, Oklahoma City.
Lytle, William R., Major, 813 Wilson Ave., Seminole.
Rogers, Galen A., Lt. Col., San Rur Station, Talihina.

Pennsylvania

Conley, John J., Major, 313 Rowland Ave., Carnegie.
Cottrell, James E., Lt. Col., 6100 W. Oxford St., Philadelphia.
Dvorchak, George E., Capt., 608 S. 3d Ave., Patton.
Fliegelman, Maurice T., Major, 6433 N. Broad St., Philadelphia.
Herley, Paul J., Capt., 309 Chestnut St., Coatesville.
Jamison, Edgar L., Major, 22 Rosedale Ave., Greenville.
Jones, Eurfryn, Major, 2515 Market St., Camp Hill.
Kroungold, Milton L., Capt., 2150 N. Front St., Philadelphia.
Likoff, William, Major, 6117 Carpenter St., Philadelphia.
Matzko, Michael J., Capt., 1145 2nd Ave., Berwick.
McCabe, Edward S., Capt., 69 E. Church St., Lock Haven.
McGovern, Edward B., Capt., 554 Washington Ave., Carnegie.
McTear, Thomas F., Capt., 2423 W. Lehigh Ave., Philadelphia.
Medwick, Joseph X., Major, 123 Marshall St., Lancaster.
Metzgar, Thomas I., Major, 45 N. 7th St., Stroudsburg.
Minteer, James W., Major, 505 Hyde Ave., Ridgeway.
Myers, Martin A., Capt., 1018 W. Moyamensing, Philadelphia.
Renzulli, Francis J., Capt., 407 W. Shelten Ave., Philadelphia.
Rittenhouse, Emory A., Major, 1612 Bailey Ave., McKeesport.
Robinson, Joseph, Capt., Camac & Lindley Ave., Philadelphia.
Ronis, Bernard J., Major, 7141 Elmwood Ave., Philadelphia.
Rosen, Samuel C., Lt. Col., 1928 Pine St., Philadelphia.
Rosner, Isador K., Capt., 5759 Pine, Philadelphia.
Rosset, Ephriam M., Capt., 3107 W. Diamond St., Philadelphia.
Schwab, John E., Capt., 7310 N. Walnut Lane, Philadelphia.
Shannon, Dean R., Capt., 1490 Greenmont St., Dormont.
Sigmond, Henry I., Lt. Col., 1101 W. Lehigh Ave., Philadelphia.
Smith, Henry L. Jr., Capt., Pennsylvania Hosp., Philadelphia.
Sobell, Harry, Capt., 4637 Walnut St., Philadelphia.

Pennsylvania—Continued

Stein, Alfred B., Major, 61 E. Mowry, Chester.
Summons, Howard J., Capt., 117 Windsor St., Reading.
Sutton, Robert L., Lt. Col., 194 Lincoln Ave., Pittsburgh.
Swift, John E., Lt. Col., 145 S. Main St., Scranton.
Tracy, Henry M., Capt., 301 W. 7th St., Chester.
Wells, Charles Robert E., Capt., 1201 3rd Ave., New Brighton.
Whildin, James Griffith, Major, 252 E. Patterson St., Lansford.
Willard, Samuel B., Capt., 95 E. State St., Doylestown.
Wirts, Charles W. Jr., Lt. Col., 2017 Delancey St., Philadelphia.
Yahraus, William P., 1st Lt., 439 N. Duke St., Lancaster.
Zox, M. L., Major, Jewish Hosp., at Tabor Rd., Philadelphia.

Rhode Island

Angelone, Carmine T., Capt., 872 Park Ave., Cranston.
Baronian, Durtad R., Capt., 686 Cranston St., Providence.
Botvin, Morris, Major, 1 Lillian Ave., Providence.
Dawson, Percival G., Capt., 211 Howell St., Providence.
Drew, Robert W., Capt., Warren.
Giles, William P., Capt., 37 S. Angell St., Providence.
Keegan, George A., Capt., 378 Park Pl., Woonsocket.
Rice, Richard, Capt., R. I. Hospital, Providence.
Superfisky, Paul P., 1st Lt., 15 Mansion St., Pittsburgh.

Tennessee

Allen, Robert J., Capt., 203 E. F. St., Elizabethton.
Ball, Albert L., Major, Midland Ave., Memphis.
Edwards, Elbert E. Jr., Capt., Bells.
Evans, Milton L., Capt., 706 S. Mansfield St., Memphis.
Gotwald, David K., Lt. Col., Vanderbilt Hosp., Nashville.
Graves, John H., Major, 2019 Union Ave., Memphis.
Grubb, Glenn D., Major, 2906 E. 5th, Knoxville.
Hamilton, James J., Capt., Church Hill.
Jones, Albert M., Capt., 1145 Madison Ave., Memphis.
Odom, Eugene P., Capt., Route 6, Murfreesboro.
Sayers, Joseph H., Major, Hillsboro Rd., Nashville.
Sullivan, William A., Lt. Col., 2318 West End Ave., Nashville.
Taylor, Alva R., Capt., Humboldt Hgy., Jackson.
Tripp, Alvin B., Capt., 2057 Hallwood Dr., Memphis.
Waring, Thomas L., Col., 869 Madison Ave., Memphis.
Wilson, Harwell, Lt. Col., 346 N. McLean Blvd., Memphis.
Woodson, Howell D., Capt., Baptist Hospital, Memphis.
Wooley, Clifton W., Capt., 541 Prescott St., Memphis.
Wylie, Paul E., Major, Bemis.

Texas

Bourdon, Lynn L., Major, 2315 Watts, Houston.
Calderoni, Francisco F., Capt., 1144 Washington St., Brownsville.
Crawford, Ralph C., Capt., 104 Fauna St., Houston.
DeBord, Bert A. Jr., Capt., 902 S. 7th St., Temple.
Dimmitt, Dean P., Major, 225 W. Cypress St., San Antonio.
Epstein, Isadore M., Major, 1218 Mills Bldg., El Paso.
Evans, Charles W. Jr., Major, Fastrill.
Freed, Harold, Major, 5804 Swiss Ave., Dallas.
Frobese, Alfred S., Capt., 1408 Hardouin Ave., Austin.
Gray, Willis J., Major, Moulton.
Griffin, Harold E., Capt., 800 Avenue B, Galveston.
Halpin, Frank W., Lt. Col., 5101 Bryce Ave., Ft. Worth.
Herrod, James H., Capt., 408 W. 15th St., Austin.
Hooks, Jim M. Jr., Capt., 1181 Sayles Blvd., Abilene.
Hotchkiss, DeWitt H. Jr., Lt. Col., 618 Branard St., Houston.
Ivey, Hubert T., Lt. Col., Veterans Admin., Legion.
Jaworski, Hannibal L., Col., 701 Amicable Bldg., Waco.
Jinkins, A. J., Capt., 5101 Ave. S½, Galveston.
Jones, Elmer K., Capt., Wellington.
Kaminsky, Peter B., Capt., 3517 Fairmount, Dallas.
Koch, Alvis A., Major, Ingleside.
Leeper, Edward P., Lt. Col., 4218 McFarlin, Dallas.
Logsdon, Charles Philip C., Capt., Palo Pinto.
Lowrey, Ernest E., Capt., 1204 College St., Gatesville.
Lyday, Victor I., Major, 3406½ Swiss, Dallas.
Middleton, Edwin E., Capt., 942 Elmwood Dr., Abilene.
Primer, Benjamin M., Col., 919 W. 29th St., Austin.
Readinger, Ivan H., Lt. Col., 3308 Memphis St., El Paso.
Rosenbloom, J., Capt., Broaddus.
Sheddan, Frank G. Jr., Major, Sinclair Bldg., Ft. Worth.
Shipp, John R., Major, Cransfills Gap.
Spiller, William F., Lt. Col., 206 Medical Bldg., Galveston.
Yeager, Franklin W., Capt., 414 Cole Blvd., Corpus Christi.
Zink, Linus A., Major, Pecos.

Wyoming

De Kay, Emory W., Capt., 209 Grand, Laramie.
Fitzgerald, Richard P., Capt., 1048 S. Lincoln, Casper.
Halsey, Guy M., Capt., 208 Clark St., Laramie.

ORGANIZATION SECTION

Council on Medical Service and Public Relations

MEETING OF FEBRUARY 13 AND 14, 1946

The meeting of the Council on Medical Service and Public Relations was called to order by the chairman, Dr. E. J. McCormick, Toledo, Ohio, in the Council office, American Medical Association, Chicago.

Council members present were Dr. Olin West, Headquarters; Dr. A. W. Adson, Rochester, Minn.; Dr. James R. McVay, Kansas City, Mo.; Dr. R. L. Zech, Seattle; Dr. Louis H. Bauer, Hempstead, L. I., N. Y.; Dr. Walter B. Martin, Norfolk, Va.; Dr. T. A. McGoldrick, Brooklyn, and Dr. Joseph S. Lawrence, Washington, D. C.; Mr. Thomas A. Hendricks, secretary, and Mr. George W. Cooley, assistant.

Others present during part of the meeting were Dr. Carl Peterson, Secretary, Council on Industrial Health; Dr. A. J. Offerman, president, Nebraska Medical Service, Omaha; Dr. F. L. Feierabend, secretary, Surgical Care, Inc., Kansas City, Mo.; Dr. F. F. Borzell, vice speaker, House of Delegates, American Medical Association, Philadelphia; Mr. Jay Ketchum, executive vice president, Michigan Medical Service, Detroit; Mr. MacCahal, executive secretary, American College of Radiology, Chicago, and Mr. J. W. Holloway Jr., Director, Bureau of Legal Medicine and Legislation, Chicago.

Report on Associated Medical Care Plans, Inc.—Mr. Jay Ketchum gave an account of the meeting on Tuesday, February 12, attended by fifty representatives of various prepayment medical care plans. It was explained that, as a result of the joint executive committee meeting of the Board of Trustees and the Council on Medical Service and Public Relations held Jan. 11, 1946, the officers of the Medical Service Plans Council of America had called a meeting of plan representatives to discuss a possible reorganization of this group. At this meeting held on February 12 a revised constitution and by-laws was drawn up and adopted under the new name of Associated Medical Care Plans, Inc. The officers of the association were instructed to proceed immediately with incorporation in the state of Illinois. The purpose of this new group as stated by Mr. Ketchum and Dr. Feierabend is to act as a clearing house for certain types of administrative information for the plans themselves, to assist the plans in obtaining some uniformity in their contracts and to work with the Council on Medical Service and Public Relations in coordinating and encouraging existing plans and assisting in the development of plans where they do not now exist.

Under the proposal, Associated Medical Care Plans, Inc., is to be directed by a commission of not less than thirteen and not more than twenty persons. The majority of this commission must be members of the American Medical Association, three of whom shall be members of the Council on Medical Service and Public Relations.

Discussion resulted as to the need for such an organization as Associated Medical Care Plans, Inc. Several Council members expressed the opinion that it merely duplicated the functions of the Council and that the responsibility for this work lay on the American Medical Association rather than on an outside organization. Assurance was given, however, that Associated Medical Care Plans, Inc., is to be an organization of administrators only, to assist one another in detailed administrative work and to assist the Council on Medical Service and Public Relations in the overall job of coordinating existing plans and developing new plans.

In executive session the Council discussed the relationship between Associated Medical Care Plans, Inc., and the American Medical Association.

Suggested standards for the acceptance of prepayment medical care plans and the standards of acceptance for prepayment medical care plans were discussed and approved as amended. These standards are to be used by the Council to grant the official seal of the Council to such plans as qualify within the standards set forth.

Recommendations to the Board of Trustees.—The following statement was prepared for the joint meeting of the Council on Medical Service and Public Relations and the Board of Trustees to be held February 14.

"The Council on Medical Service and Public Relations recommends the employment of a Director of its Division of Prepayment Medical Care Plans and the necessary staff. It also is recommended that the Council appoint an Advisory Committee representing medical care plans and their associations.

"The Council has determined standards for medical care plans, a copy of which is attached. Plans which meet these standards shall be entitled to the use of the Council Seal during the period of their approval.

"The Director of the Division of Prepayment Medical Care Plans of the Council on Medical Service and Public Relations with his staff and with the assistance and cooperation of the Advisory Committee, the state medical societies and Associated Medical Care Plans, Inc., shall be available to assist in developing plans, increasing the number of persons covered by already existing plans and facilitating reciprocity among them.

"The Council believes that responsibility for the development of medical care plans rests with state and county medical societies. Stimulation, coordination and the federation of such plans under the instructions of the House of Delegates is deemed to be the function of the Council on Medical Service and Public Relations and the Board of Trustees of the American Medical Association.

"The duty of the Advisory Committee shall be to advise the Director of Prepayment Medical Care Plans and the Council on the methods of implementing the program and, on approval of the Council, the Director of Prepayment Medical Care Plans will undertake the functions described in paragraph 3.

"The Advisory Committee shall consist of five members, appointed for one year. For the first year it is suggested that the following comprise the committee: Mr. Jay Ketchum, Dr. F. L. Feierabend, Dr. Herbert Bauckus, Mr. William Bowman and Mr. Charles Crownhart.

"A tentative cost of this program is estimated at $50,000 for the first year."

The Council also brought to the attention of the Board of Trustees the following proposals originally made to the executive committee of the Board of Trustees on January 11:

"1. A letter to the plans now in operation explaining the program of the Council and asking for specific information and data as a preliminary report and requesting suggestions as to future regular reports.

"2. Release of a monthly news letter on prepayment plans' activities to which all plans be invited to submit news items and articles.

"The use of such space as is necessary in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION to set forth pertinent and interesting information of the prepayment medical plans.

"3. Publication of an official roster of medical society sponsored and approved plans, including pertinent information on each.

"4. The adoption of a common symbol or trade mark for the use of the medical societies sponsored and approved plans.

"5. The establishment of an Advisory Service within the Council on Medical Service and Public Relations to provide speakers and technical advisers in relation to matters of organization and administration for county and state medical societies in the formation of plans, such speakers and advisers to be designated by the Council on Medical Service and Public Relations."

Several of these items are already being carried out, and steps are being taken to carry out the others. The Council proposed that the following additional recommendations be approved as part of the program:

1. Establishment of a public relations and press division of the Council on Medical Service and Public Relations to supply the national press through the present A. M. A. Public Relations Department with specific items and stories concerning the various plans for prepayment care, both on national and on local levels.

2. Preparation of literature, speeches, and so forth for representatives on the Council.

3. Preparation of excerpts from the News Letters and bulletins to be given to the press by the A. M. A. Public Relations Department.

4. Preparation of pamphlets for speeches with help of the Bureau of Medical Economics.

It was recommended that state societies and medical care plans be kept informed of the action taken in Michigan, California, Kansas and New Jersey regarding veterans' care and that they be urged to consider taking similar action, and that a copy of Col. J. C. Harding's statement made at the recent state secretaries' conference be attached to the letter for their information.

In accord with the recommendation by the Advisory Committee the Council is to encourage and assist local plans in development of arrangements for care of indigents and others entitled to public assistance, to provide adequate care, of good quality for such persons, with free choice of physician. As this has already been endorsed by the House of Delegates, the Council urged that the care of the indigent be done through medical care plans and put into action wherever possible. Plans now in operation are to put it into effect as soon as possible.

The Council further recommended the creation of a national insurance program to supplement the activities that are at present being carried on by the individual state, county and city plans but not to interfere with any of the present plans. It recommended that it proceed with a national insurance company in the manner suggested by Mr. Don Hawkins whereby the American Health Insurance Corporation would be used as the vehicle to carry out the activities in each state in agreement with the individual states; that the members of the medical profession form a holding company as provided in Mr. Hawkins' suggestions such persons to be selected by the Board of Trustees and the Council on Medical Service and Public Relations. It was stated that the plan can be put into effect in less than ninety days. It further recommended that, in the event the Board of Trustees rejects the proposals made by the Council relative to using the American Health Corporation as a vehicle for establishing a national insurance program, the Trustees should endorse and support a national insurance company sponsored and in cooperation with outside groups by contributions from various medical societies and the American Medical Association.

The Council recommended to the Board of Trustees that a representative from the Board of Trustees and/or the Council on Medical Service and Public Relations be appointed to act in an advisory capacity to any group or groups interested in introducing legislation affecting the health of the American people.

Regional Conferences.—Mr. Hendricks gave a report of the Middle Atlantic and New England regional conferences.

National Health Congress.—A letter from Mr. Harvey Sethman of Colorado, secretary-treasurer of the Conference of State Medical Society Presidents, was read. In the letter Mr. Sethman urged the Board of Trustees to take action with reference to the formation of a national health congress as proposed in the resolution adopted by the House of Delegates. It was generally agreed that the matter should be turned over to a subcommittee and Mr. Hendricks for further contact with the presidents of the various state medical associations to ascertain whether or not they have such a health congress in their various states and whether or not they would be willing to form one. It was felt that such a program should originate on the state level, and that at such time as it is well organized the Council should hold a national meeting in Chicago.

Public Relations for State and Local Medical Societies.—Mr. Hendricks suggested that it might be well to assist state and local societies in the development of public relations by preparing a brochure on public relations and by preparing a complete bibliography covering both the general and specific fields of public relations and publicity.

Health Insurance Kits.—Because of the many requests for material on compulsory health insurance, it was suggested that the Council prepare kits for the various state and local medical officers and for officers of the Woman's Auxiliary.

Expression of Condolence to Mrs. W. S. Leathers.—The Council voted unanimously to express its sorrow and loss at the death of Dr. W. S. Leathers, former member of the Council, and requested Mr. Hendricks to convey the expression to Mrs. Leathers.

PREPAID MEDICAL CARE NEWS

United Medical Service, Inc., Broadens Contract

A more liberal contract has been announced by United Medical Service, Inc., 370 Lexington Avenue, New York City. Under the new provisions small employed groups and individuals not affiliated employers already under U. M. S. may subscribe to the plan.

The new provisions also affect some 300,000 persons heretofore unable to obtain maternity benefits under U. M. S. These individuals, originally enrolled in Blue Cross, subsequently left their places of employment and continued their subscription on a nongroup basis. Under the U. M. S. family contract they may now obtain surgical indemnity in hospitals including maternity benefits.

Provision has also been made for minor surgical operations performed in a doctor's office.

More than 175,000 persons now subscribe to U. M. S., with approximately 10,000 physicians participating.

Woman's Auxiliary

West Virginia

The fall meeting of the executive board of the Woman's Auxiliary to the West Virginia State Medical Association was held at the Daniel Boone Hotel, Charleston. Among those who attended were the following officers and members of the advisory board: Mrs. Ulysses G. McClure, president, Charleston; Mrs. Delmas E. Greeneltch, president-elect, Wheeling; Mrs. Dana T. Moore, recording secretary, Parkersburg; Mrs. Ralph S. McLaughlin, corresponding secretary, Charleston; Mrs. Scott A. Ford, past president, Beckley; Mrs. A. G. Rutherford, first auxiliary president, Huntington, and Drs. Hu C. Myers, Philippi, John P. Helmick, Fairmont, Scott A. Ford, Beckley, and U. G. McClure, Charleston, members of the advisory board. Mrs. John P. Helmick, past president and now president of the Auxiliary to the Southern Medical Association, Fairmont, was also present.

The officers and members of the board were guests at a luncheon at which members of the Woman's Auxiliary to the Kanawha Medical Society were hostesses. Mrs. J. Preston Lilly, president of the Kanawha auxiliary, presided as chairman.

Guest speakers were Dr. Bert Bradford Jr., Charleston, who spoke on the work of the committee on relocation and reestablishment of returning medical veterans, of which he is a member, and Mr. Charles Lively, executive secretary of the state medical association, who discussed pending medical legislation.

The executive board of the Woman's Auxiliary to the State Medical Association has fixed May 13-15, 1946 as the time for the twenty-second annual meeting, which will be held at Huntington conjointly with the state medical association. The program for the annual meeting is in charge of the convention committee, of which Mrs. E. J. Humphrey, Huntington, is chairman.

Medical Legislation

STATE LEGISLATION

Kentucky

Bills Passed.—S. 87 passed the house March 21. It proposes that no person after July 1, 1946 shall maintain a hospital in the state without first obtaining a license therefor. The word "hospital" is defined as "any institution which maintains and operates organized facilities for the diagnosis, treatment and care of humans suffering from illness, injury or deformity, where bedside nursing care is rendered for a period exceeding twenty-four (24) hours, to care for ten (10) patients or more." S. 152 passed the house March 21. To amend the law relating to the practice of pharmacy, it proposes that any one who, while in the service of the armed forces, was regularly employed for a period not less than twelve months in the preparation and dispensing of drugs and medicines and who, in addition thereto, has successfully completed at least two years of study in a recognized college of pharmacy may apply for a pharmacist's license.

Bills Enacted.—H. 171 was approved March 23. It authorizes the establishment, maintenance and operation of medical service plan corporations. "Medical services" means the "general and usual services rendered and care administered by doctors of medicine." "Participating physician" means a "doctor of medicine licensed to practice medicine and surgery in this state under the provisions of the medical practice act" who agrees in writing to perform the services specified by the subscription certificates. S. 109 was approved March 23. To amend the law relating to the practice of chiropractic, it increases the required period of academic training and adds philosophy to the list of subjects which must be studied.

Massachusetts

Bills Introduced.—H. 820 proposes to authorize the department of mental health to construct and maintain an additional hospital for feebleminded children. H. 974 proposes that any veteran who had previous experience or qualifications in any trade or occupation licensed by the commonwealth shall be exempt from provisions of new laws enacted since the beginning of World War II. H. 1134, to amend the law relating to the offense of operating a motor vehicle while under the influence of intoxicating liquor, proposes that no person shall be adjudged guilty of such offense in the absence of testimony from a physician licensed to practice in this commonwealth to the effect that such person was under the influence of intoxicating liquor at the time of the alleged offense.

Bills Passed.—H. 298 passed the house March 25. To amend the law relating to the practice of pharmacy, it proposes to authorize the board and the commissioner of education to establish standards to be met by colleges of pharmacy, to grant certificates of approval to colleges meeting such standards and to revoke any certificate of approval previously issued to any college which lowers its standards below that established by the board and the commissioner. H. 1132 passed the house March 25. To amend the law relating to actions for personal injuries, it proposes that a physician or surgeon who makes a physical or mental examination of an injured person in connection with any claim for damages for personal injuries shall be deemed to be the agent of the party for whose information the examination was made for the purpose of answering interrogatories.

Bill Enacted.—H. 74 has become chapter 155 of the Laws of 1946. To amend the law relating to bacteriologic laboratories, it authorizes the department of public health to grant certificates of approval for laboratory tests on milk, foods, eating utensils, water and sewage in accordance with such rules and regulations as the department may establish.

Mississippi

Bills Passed.—H. 994 passed the senate March 25. It proposes an appropriation to be used and expended by the state board of health and the state department of education in cooperation with the international health division of the Rockefeller Foundation and the general education board, respectively, in carrying out a program of coordinated school, health and nutrition services. S. 221 passed the senate March 20. It proposes to require all teachers in the elementary and high schools of the state, and all other state employees who work directly with children, to submit annually to an examination for tuberculosis, including an x-ray analysis, by a competent physician or by the state health department.

Missouri

Bills Passed.—S. 424 passed the house March 28. It proposes to transfer to the State Board of Medical Examiners certain powers and duties heretofore vested in the State Board of Health. S. 432 passed the house March 26. It proposes the creation of a State Board of Chiropody and the assumption by such board of powers and duties heretofore vested in the State Board of Health. S. 433 passed the house March 26. It proposes to transfer to the State Board of Chiropody certain powers relating to licensure and registration of practitioners heretofore vested in the State Board of Health. S. 434 passed the house March 26. Relating to the licensing of midwives, it proposes to transfer to the division of registration and examination of the state department of education certain powers heretofore vested in the State Board of Health. S. 435 passed the house March 26. Relating to the licensing of chiropractors, it proposes to transfer to the executive secretary of the division of registration and examination of the state department of education certain powers heretofore vested in the State Board of Chiropractic.

Bills Enacted.—H. 280 was approved March 25. It authorizes a county or a group of counties to operate a health center. H. 754 was approved March 15. It authorizes any county to build and maintain a county hospital. H. 831 was approved March 15. To amend the law relating to the appointment of deputy state commissioners of health, it authorizes the county courts of any county to appoint as a deputy state commissioner of health a duly licensed qualified physician. The existing law requires only the appointment of a reputable physician.

New Jersey

Bills Introduced.—A. 47 proposes the establishment in the executive branch of the state government of a state department of health, the chief administrative officer of the department to be the state commissioner of health, who shall be a duly licensed physician, a graduate of a regularly chartered and legally constituted medical school, with at least five years' experience in the actual performance of public health duties, and with skill and experience in public health administration and sanitary science. He would receive an annual compensation of $15,000. S. 197, relating to coroners' and county physicians' reports, proposes that whenever an autopsy or chemical analysis is deemed necessary the county physician, or the coroner, shall cause a report of the findings of such autopsy, chemical analysis or other test to be filed with the county prosecutor's office, and such report shall be available for inspection to all officials, doctors or citizens having an established legitimate interest in the same.

Bills Passed.—S. 120 passed the senate March 19. It proposes the establishment of a diagnostic center to be fully equipped with all modern scientific equipment and provided with a staff of competent specialists in the field of medicine, psychiatry and psychology, to the end that full and complete diagnostic services shall be available to any governmental agency desiring to secure a complete diagnosis of any individual having need for such services. S. 278 passed the senate March 25. To amend the law relating to medical service corporations, it proposes, according to a statement attached to the bill, "to enable veterans with service connected disabilities to choose their own personal physician and to be treated in local hospitals that have been designated by the Veterans Administration."

New York

Bills Passed.—A. Res. 68 passed the assembly and the senate March 21. It proposes the creation of a joint legislative committee to make a survey and study of the socal, educational and physical problems of individuals afflicted with cerebral palsy,

with special attention to those whose muscle involvement is commonly referred to as (1) spasticity or (2) athetosis or (3) ataxia and including those who have similar central motor or sensory defects. A. 2083 passed the senate March 25. It proposes to extend the life of the temporary state commission previously appointed to formulate a long-range health program from March 1946 to March 1947. A. 2274 passed the assembly March 21 and the senate March 22. To amend the public health law, it proposes provisions governing the furnishing of care and treatment to persons suffering from tuberculosis as well as diagnostic tests, studies and analyses for the discovery of tuberculosis, without cost or charge to any resident of the state who is suffering from, or is suspected of having, tuberculosis. A. 2582 passed the assembly March 21 and the senate March 25. To amend the education law, it proposes the granting of a license to practice physiotherapy without examination to persons showing a certificate of honorable discharge from the United States Army, Navy or Marine Corps and presenting to the department evidence that at the time of entrance into the military service he was a resident of the state and a graduate in good standing of a legally chartered school or college in the United States teaching physiotherapy, which school required a course of study equivalent to four years of seven months each. A. 2739 passed the senate March 25. It proposes to authorize the state department of taxation and finance to receive from the federal government any moneys which the federal government shall offer to the state to assist to inventory its hospitals, to survey the need for construction of hospitals, to develop a program for construction of public and other nonprofit hospitals and to construct such hospitals in accordance with such program, and generally for all of the purposes for which any such moneys shall be offered pursuant to any federal law. The term "hospitals" includes public health centers and related facilities. S. 1189 passed the assembly March 25. To amend the law relating to live pathogenic micro-organisms or viruses, it proposes that persons cultivating or possessing live pathogenic micro-organisms or viruses must satisfy the commissioner of health that such organisms or viruses will not become a menace to the public health and shall register with the commissioner of health. The registration must be renewed each year. S. 1319 passed the senate March 20 and the assembly March 21. To amend the law relating to hypnotic and somnifacient drugs, it would prohibit prescription therefor from being refilled if the prescription bears a direction to that effect. The proposal would further authorize the prescribers to indicate the number of times a prescription may be refilled. If the prescription is silent as to the refilling, then the prescription may be refilled by the pharmacist during a period of not more than six months from the original date of the prescription. A pharmacist would be prohibited from furnishing a copy of the prescription to the patient. S. 1354 passed the assembly March 25. To amend the law relating to nonprofit medical and hospital service corporations, it proposes to authorize the creation of dental expense indemnity service plans. Dental expense indemnity would consist of reimbursement for dental care provided through duly licensed dentists and for furnishing necessary appliances, drugs, medicines and supplies, prosthetic appliances, orthodontic appliances, precious metal and ceramic restorations. S. 1380 passed the senate March 25. To amend the law relating to divorce, it proposes to authorize reports of physicians to be received in evidence without the personal appearance of the physicians themselves, where insanity is in issue. S. 1563 passed the senate March 20 and the assembly March 25. It proposes the creation of a board of examiners in ophthalmic dispensing. S. 1695 passed the assembly March 20. To amend the education law, it proposes to redefine a podiatrist as one "who holds himself out as being able to diagnose, treat, operate or prescribe for any disease, pain, injury, deficiency, deformity or physical condition of the human feet, and who shall either offer or undertake by any means or method to diagnose, treat, operate or prescribe for any disease, pain, injury, deficiency, deformity or physical condition of the same within the following limitations: operations on the feet shall be limited to minor surgery; and the use of anesthesia shall be limited to local anesthetics." S. 1797 passed the assembly March 21. To amend the workmen's compensation law, it proposes that physician members of the industrial council shall not be eligible for authorization to render medical care under the act and shall not examine, treat, consult or in any other way care for a compensation claimant either at the request of such claimant or of a carrier. S. 2392 passed the senate March 22. It proposes to authorize the state department of taxation and finance to receive from the federal government any moneys which the federal government shall offer to the state to assist to inventory its hospitals, to survey the need for construction of hospitals, to develop a program for construction of public and other nonprofit hospitals and to construct such hospitals in accordance with such program. Hospitals would include public health centers and related facilities.

Rhode Island

Bills Introduced.—H. 960 proposes to extend to March 20, 1946 the life of the special committee studying problems arising out of the Rhode Island Cash Sickness Compensation Act. S. 224 proposes the creation of a state board of examiners in naturopathy. According to the proposal, "Naturopathy . . . is a distinct system of healing based upon its own teachings as to cause of disease, the prevention and cure of human illness and the maintenance of health. It uses no drugs or medicines. It is the science of prevention, diagnosis and treatment of disease by means of any one or more of the psychological, physical and material forces or agencies of nature. Its philosophy embraces the triplicity of sciences: The psychological: such as psychotherapy. The physical or mechanical: such as manual or mechanical manipulation, exercise, hydrotherapy, heat, light, pneumatics and electrical and mechanical devices. The material: (Phytotherapy) such as corrective nutritional and dietetic regimens, concentrated supplemental food substances and fasting as correctives in the treatment of disease and maintenance of health." Licentiates would not be authorized to write prescriptions for drugs or internal medication or practice major surgery.

South Carolina

Bill Passed.—H. 1157 passed the house March 22. It proposes that no person or combination of persons shall practice or attempt to practice as a dental laboratory technician without a certificate or registration either as a registered apprentice or as a registered dental laboratory technician issued pursuant to the provisions of this act by the state board of dental examiners. The practice of a dental laboratory technician is described as "the fabrication of prosthetic dental appliances, such as the using of gold, other metals or combination of metals, plastics, porcelains, artificial teeth or other materials in the manufacture of appliances worn in the oral cavity, replacing teeth and tissue or worn on or around the teeth." S. 101 passed the house March 22. It proposes to require every physician attending a pregnant woman for a condition relating to pregnancy to take or cause to be taken a sample of her blood at the time of the first examination and to submit that sample to an approved laboratory for a standard serologic test for syphilis.

Bill Enacted.—H. 566 has become Governor's Act No. 546 of the Acts of 1946. It amends the definition of the practice of optometry by including therein one who practices orthoptics or who prescribes or fits contact lenses.

Virginia

Bills Enacted.—H. 257 has become chapter 295 of the Laws of 1946. It provides that any person who has tuberculosis in a communicable form who, having been instructed in writing by the local board of health, department of health or health officer or superintendent of any sanatorium of the state to take precautions to protect the members of his household and the public from being infected by tuberculosis communicated by such person, wilfully refuses to follow such instructions shall be guilty of a misdemeanor. S. 21 has become chapter 197 of the Laws of 1946. It authorizes the state board of health to initiate and administer a program of hospital and outpatient treatment and care for indigent and medically indigent persons residing in the state. S. 149 has become chapter 186 of the Laws of 1946. It authorizes the creation of city hospital authorities to investigate hospital, medical and health conditions and to carry out hospital projects so as to provide adequate hospital, medical and nursing facilities. S. 237 has become chapter 280 of the Laws of 1946. It provides for the creation of an examining board for the certification of clinical psychologists.

West Virginia

Bill Enacted.—S. 3-X was approved March 28. It provides a new law for the organization and regulation of hospital service and medical service corporations. Among other features, it creates a hospital and medical service advisory council to assist the insurance commissioner in the supervision of such corporations. "Medical service" is defined as "such medical and surgical care, to be provided by duly licensed physicians, or such payment therefor, as may be specified in the contract made by the subscriber with the corporation."

Washington Letter

(From a Special Correspondent)

April 1, 1946.

Veterans to Get Three Way Hospitalization Program

Gen. Omar N. Bradley, Veterans Administrator, has announced a three way hospitalization program for his agency which he says will give ex-servicemen and women medical care "second to none." The three points are (1) immediate construction of new hospitals to cost $448,000,000, eighty in all, with additions to present hospitals, (2) a drive to staff Veterans Administration hospitals with the best doctors in the country and (3) an arrangement with state medical groups to give veterans with service connected disabilities treatment in their own home towns by their own private doctors and hospitals. Dr. (formerly Major General) Paul R. Hawley, chief of the Veterans Administration new Department of Medicine and Surgery, already has some of the plans in operation on behalf of war veterans. Congress has authorized the $448,000,000 for hospitals but has appropriated only $300,000,000. The agency is confident that the remaining $148,000,000 will be forthcoming. The agency is at present seeking four hundred physicians to fill vacancies as rating specialists in regional offices. Veterans are to be given preference in appointments as consulting specialists for veterans' hospitals.

Military Training Legislation Being Shelved

House Military Committee members predict that there will be no universal military training legislation this year. It is planned to submit the controversial subject to the new Congress when it convenes next January. The fact that this is an election year is a determining fact. Furthermore the Army has stated that it does not want selective service and universal training at the same time, and it is now asking for an extension of the wartime draft. The Senate Military Affairs Committee has set April 9 as a deadline for a vote on draft extension.

Proposal for Cancer Research Center

The National Advisory Cancer Council has asked for construction of a cancer research hospital at Bethesda, Md., adjacent to Washington, as part of the national campaign to combat the disease. Eric Johnston, president of the United States Chamber of Commerce, opening cancer control month, asked for a nationwide education campaign. The Advisory Cancer Council has urged Surg. Gen. Thomas Parran to ask Congress for funds to build a cancer hospital adjacent to the National Cancer Institute.

Reduction in Fatality Rate of Meningitis

Dr. James G. Cummings, head of the District of Columbia Health Department Bureau of Preventable Diseases, pointed to the possibility of meningitis becoming a rare disease when he called attention to the drop in the fatality rate from 40 to 10 per cent in the last ten years. He gave credit to use of sulfonamide drugs and penicillin and said that continued efforts in early diagnosis and treatment would reduce deaths still further.

Many Physicians Still in Army and Navy

Despite discharges, more than two thirds of the total of 845 practicing physicians, hospital residents and interns of Washington who joined the armed services are still in uniform, a poll shows. And of the total of 262 who have returned, only a small number have been able to find office space either to resume or to begin practice. One physician said that many doctors are literally "practicing out of their hats."

Coming Medical Meetings

Aero Medical Association, Chicago, April 7-9. Dr. David S. Brachman, 1016 Dime Building, Detroit 26, Secretary.

Alabama, Medical Association of the State of, Birmingham, April 16-18. Dr. Douglas L. Cannon, 519 Dexter Ave., Montgomery 4, Secretary.

American Association for Thoracic Surgery, Detroit, May 29-31. Dr. Richard H. Meade Jr., Kennedy General Hospital, Memphis 15, Tenn., Secretary.

American Association of the History of Medicine, Atlantic City, May 26-27. Mr. W. B. McDaniel 2d, 19 S. 22d St., Philadelphia 3, Secretary.

American Broncho-Esophagological Association, Chicago, May 31. Dr. Paul H. Holinger, 700 N. Michigan Ave., Chicago 11, Secretary.

American College of Physicians, Philadelphia, May 13-17. Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Executive Secretary.

American Gastro-Enterological Association, Atlantic City, May 24-25. Dr. J. Arnold Bargen, 102 Second Ave., S. W., Rochester, Minn., Secretary.

American Laryngological Association, Chicago, May 29-30. Dr. Arthur W. Proetz, 3720 Washington Blvd., St. Louis 8, Secretary.

American Laryngological, Rhinological and Otological Society, Chicago, May 27-28. Dr. C. Stewart Nash, 277 Alexander St., Rochester 7, New York, Secretary.

American Otological Society, Chicago, May 31-June 1. Dr. Gordon D. Hoople, 713 E. Genesee St., Syracuse, N. Y., Secretary.

American Pediatric Society, Skytop, Pa., May 1-3. Dr. Hugh McCulloch, 325 N. Euclid Ave., St. Louis 8, Secretary.

American Psychiatric Association, Chicago, May 27-30. Dr. Winfred Overholser, St. Elizabeth's Hospital, Washington 20, D. C., Secretary.

American Society for Research in Psychosomatic Problems, New York, May 11-12. Dr. Edwin G. Zabriskie, 714 Madison Ave., New York 21, Secretary.

Arizona State Medical Association, Phoenix, May 2-3. Dr. Frank J. Milloy, 112 N. Central Ave., Phoenix, Secretary.

Arkansas Medical Society, Little Rock, April 14-15. Dr. W. R. Brooksher, 602 Garrison Ave., Fort Smith, Secretary.

Association of American Physicians, Atlantic City, May 28-29. Dr. Joseph T. Wearn, 2065 Adelbert Road, Cleveland 6, Secretary.

California Medical Association, Los Angeles, May 7-10. Dr. George H. Kress, 450 Sutter St., San Francisco 8, Secretary.

Central States Dermatological Society, Detroit, April 27. Dr. Clarence E. Reyner, Henry Ford Hospital, Detroit, Secretary.

Connecticut State Medical Society, Hartford, May 1-3. Dr. Creighton Barker, 258 Church St., New Haven 10, Secretary.

Florida Medical Association, Jacksonville, April 22-24. Dr. Robert B. McIver, P. O. Box 1018, Jacksonville, Secretary.

Georgia, Medical Association of, Macon, May 7-10. Dr. Edgar D. Shanks, 478 Peachtree St., N.E., Atlanta, Secretary.

Illinois State Medical Society, Chicago, May 14-16. Dr. Harold M. Camp, 224 S. Main St., Monmouth, Secretary.

Iowa State Medical Society, Des Moines, April 17-19. Dr. John C. Parsons, 406 Sixth Ave., Des Moines 9, Secretary.

Kansas Medical Society, Wichita, April 22-25. Dr. F. R. Croson, 112 W. Sixth St., Topeka, Secretary.

Louisiana State Medical Society, Alexandria, May 6-8. Dr. P. T. Talbot, 1430 Tulane Ave., New Orleans 13, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 23-24. Dr. W. Houston Toulson, 1211 Cathedral St., Baltimore 29, Secretary.

Massachusetts Medical Society, Boston, May 21-23. Dr. Michael A. Tighe, 8 Fenway, Boston, Secretary.

Minnesota State Medical Association, St. Paul, May 20-22. Dr. B. B. Souster, Lowry Medical Arts Bldg., St. Paul 2, Secretary.

Mississippi State Medical Association, Jackson, May 14-15. Dr. T. M. Dye, Box 295, Clarksdale, Secretary.

Nebraska State Medical Association, Lincoln, May 6-9. Dr. R. B. Adams, 416 Federal Securities Bldg., Lincoln 8, Secretary.

New Hampshire Medical Society, Manchester, May 14. Dr. C. R. Metcalf, 5 S. State St., Concord, Secretary.

New Jersey, Medical Society of, Atlantic City, May 21-23. Dr. Alfred Stahl, 55 Lincoln Park, Newark, Secretary.

New York, Medical Society of the State of, New York, April 29-May 3. Dr. Walter P. Anderton, 292 Madison Ave., New York 17, Secretary.

North Carolina, Medical Society of the State of, Pinehurst, May 1-3. Dr. Roscoe D. McMillan, P. O. Box 232, Red Springs, Secretary.

North Dakota State Medical Association, Bismarck, May 26-28. Dr. L. W. Larson, 221 Fifth St., Bismarck, Secretary.

Northern Tri-State Medical Association, South Bend, Ind., April 9. Dr. John L. Stifel, 232 Michigan St., Toledo 2, Secretary.

Ohio State Medical Association, Columbus, May 7-9. Mr. Charles S. Nelson, 79 E. State St., Columbus, Executive Secretary.

Postgraduate Institute of the Philadelphia County Medical Society, Philadelphia, April 9-12. Dr. George P. Muller, 301 S. 21st St., Philadelphia, Director.

Rhode Island Medical Society, Providence, May 15-16. Dr. William P. Buffum, 122 Waterman St., Providence 6, Secretary.

Society of American Bacteriologists, Detroit, May 21-24. Dr. Leland W. Parr, 1335 H St., N. W., Washington 5, D. C., Secretary.

South Carolina Medical Association, Myrtle Beach, April 30-May 2. Dr. Julian P. Price, 105 W. Cheves St., Florence, Secretary.

Southwest Allergy Forum, Houston, Texas, April 8-9. Dr. Albert H. Braden, 1704 Crawford St., Houston, Secretary.

Tennessee State Medical Association, Knoxville, April 9-11. Dr. W. M. Hardy, 706 Church Street, Nashville, Secretary.

Texas, State Medical Association of, Galveston, May 6-9. Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth 3, Secretary.

West Virginia Medical Association, Huntington, May 13-15. Mr. Charles Lively, P. O. Box 1031, Charleston 24, Executive Secretary.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION AND PUBLIC HEALTH.)

CALIFORNIA

Popular Medical Lectures.—The sixty-fourth course of popular medical lectures sponsored by Stanford University School of Medicine, San Francisco, consisted of the following:

March 1, Poliomyelitis, Dr. Harold K. Faber, How It Starts, Dr. William H. Northway, Its Early Treatment and Dr. Donald E. King, Its Late Treatment, all of San Francisco.

March 15, Dr. Emile F. Holman, San Francisco, Surgery of the Heart.

March 29, Dr. Russell Van Arsdale Lee, Palo Alto, The Conquest of Communicable Disease.

April 12, Dr. Robert S. Stone, San Francisco, Atomic Energy and Medicine.

Lectures for Prospective Members.—The Los Angeles County Medical Association has recently introduced a series of six lectures for applicants to membership in the association. Two lectures are to be given each month and must be attended by the applicant before his application will be considered by the council. The subjects of the lectures are medical organization, health insurance, medical public relations, medical ethics, medical education and medical economics, and medical malpractice. The first lecture, January 25, was attended by more than 200 applicants, while the five lectures held up to March 21 had been presented to audiences of 200 and more applicants. Because of previous commitments, illness or for other reasons considered adequate, applicants who have been unable to attend any one or all of the lectures given on the third and fourth Fridays of each month will be given the opportunity of making up lectures especially presented for them on Sunday afternoons. The dates for the Sunday lectures have not been set but are to be determined when the need for them arises. All applicants who have failed to attend any of the regular series are requested to notify the secretary's office and will in turn be informed as to the time of the make-up lecture. When a group of applicants has attended the six lectures, they will be interviewed in smaller groups by members of the subcommittees, following which the committee on admissions will report to the council on these applicants for membership. According to the *Bulletin* of the association this indoctrination program was presented to the council of the California Medical Association and approved with the recommendation that similar programs be instituted by other county medical associations in the state.

FLORIDA

Personal.—Dr. Erwin F. Hoffman, Jacksonville, recently resigned as epidemiologist with the state board of health and has accepted the position of director of the Central Florida Health District, with headquarters at Ocala. Dr. Hoffman will also direct the Northern Florida and Southwestern Florida Health Districts until officers have been secured for these.——Dr. George E. Lacy, Chattanooga, Tenn., has been appointed director of venereal disease control for Miami and Dade County, effective February 8.

GEORGIA

Physician Honored.—Dr. Simeon E. Sanchez, Barwick, has been selected to receive the 1945 Kiwanis award for outstanding and unselfish service to the community. Dr. Sanchez is the "man of the year" in Brooks County. The award is a plaque of bronze. Dr. Sanchez graduated at Atlanta College of Physicians and Surgeons in 1901.

Appointments at Emory.—Dr. Daniel C. Elkin has returned to his position as the Joseph B. Whitehead professor of surgery at Emory University School of Medicine, Atlanta. Dr. Elkin has been in military service. New appointments to the faculty include Drs. Frank L. Engel, New Haven, Conn., associate professor of medicine; Max Michael Jr., Athens, assistant professor of medicine; Harry L. Allen Jr., Fort Myers, Fla., assistant professor of anatomy; Albert L. Evans, Sandersville, William P. Leonard Jr., Atlanta, and Virgin D. Shepard, Rochester, Minn., all assistant professors in the department of surgery; James T. King, Quitman, and Buford L. O'Neal, Shreveport, La., assistant professors in clinical otorhinolaryngology.

ILLINOIS

Examination to Fill Position of Health Officer.—The state department of public health announces a competitive examination to fill the position of health officer of the East Side Health District, East St. Louis, to be held in Chicago on April 13. Admission to the examination will be limited to persons possessing minimum qualifications of education and experience. Further information may be obtained by writing to Dr. Roland R. Cross, director of the Illinois Department of Public Health, Springfield.

Chicago

Cardinal Stritch Aids Loyola.—Samuel Cardinal Stritch, Archbishop of Chicago, has promised to provide $50,000 a year to aid Loyola University School of Medicine if the Alumni Association will raise an annual sustaining fund of a similar amount. The Archbishop's support is to continue until the endowment fund has reached its goal and is able to maintain the school.

Dr. Slight to Direct Rehabilitation.—Dr. David Slight, Chicago, has been appointed acting superintendent of a new state division of veterans' rehabilitation centers, it was announced February 28. Dr. Slight, who will resign June 30 as professor and head of the department of psychiatry, University of Chicago School of Medicine, where he is now on sabbatical leave, will direct a statewide system of rehabilitation centers planned under the new division, which will be a part of the public welfare department.

Gift to Gifford Memorial Fund.—The department of ophthalmology, Northwestern University Medical School, has received an additional gift of $4,000 to the Sanford R. Gifford Memorial Fund from Mr. Bernard Spero, president of the House of Vision. Mr. Spero had made an earlier donation of $1,000. It is proposed to use this sum to establish a fellowship in research and teaching of refraction and allied subjects to young ophthalmologists. The memorial fund was established in 1944 by friends and associates of Dr. Sanford R. Gifford shortly after his death.

Student Receives Borden Award.—Dr. Richard S. Farr, Highland Park, Mich., has been granted the $500 Borden Undergraduate Research Award at the University of Chicago School of Medicine. Dr. Farr graduated at the medical school March 22 and was granted the award for his paper on experiments on the fate of the transfused leukocyte. A lieutenant (jg) in the U. S. Navy Medical Corps, Dr. Farr will take a naval internship. The award is one of a group that were established in various medical schools (THE JOURNAL, Dec. 22, 1945, p. 1218).

KANSAS

Changes in Health Personnel.—Dr. Thomas R. Hood, Lawrence, has been assigned as full time health officer of Cowley County, with headquarters in Winfield. Dr. H. Dale Palmer is acting director of the Sedgwick County unit during the absence of Dr. John W. Turner, Marion, who is taking graduate work in public health at the University of Michigan Medical School, Ann Arbor.——Dr. Charles M. Fitzpatrick, Salina, has been named Saline County health officer, succeeding Dr. George Seitz.

MASSACHUSETTS

Dwight O'Hara Named Dean of Tufts.—Dr. Dwight O'Hara, Waltham, president-elect of the Massachusetts Medical Society and professor of preventive medicine, Tufts College Medical School, Boston, has been made dean of the medical school. He has been acting dean for the past four years while Dr. Albert W. Stearns was on leave to the Navy Medical Corps. Dr. Stearns recently became head of the new department of applied sociology in the Tufts School of Liberal Arts, according to the New York *Times*. Dr. O'Hara graduated at Harvard Medical School, Boston, in 1919.

Licensing of Osteopathic Physicians.—The Massachusetts Approving Authority recently approved the Kirksville College of Osteopathy and Surgery, Kirksville, Mo., and the Philadelphia College of Osteopathy and Surgery, Philadelphia. Both schools are approved by the American Osteopathic Association. The approval of the Massachusetts Approving Authority followed hearings at which representatives of both schools presented all the facts concerning the qualifications demanded by the approving authority for medical schools. The approving authority had previously denied approval to the Des Moines Still College of Osteopathy, Des Moines, Iowa, which is a school approved by the American Osteopathic Association, an action indicating that the approving authority has not been giving blanket approval to all schools approved by the American Osteopathic Association. As a result of these changes in the law controlling the practice of medicine in the

commonwealth and the action of the approving authority, all applicants for examination for registration who matriculated on or after Jan. 1, 1941 must be graduates of medical schools or osteopathic schools that have been judged worthy of approval. According to the *New England Journal of Medicine*, from 1909 until the middle of 1944 graduates of any medical school, osteopathic or regular, were eligible to take the examination of the Massachusetts Board of Registration in Medicine, irrespective of the quality of the school from which they had graduated. But in 1936 the so-called "Approving Authority Law" was passed, which stated that students who matriculated at a medical school on or after Jan. 1, 1939 must have graduated from a school approved by the approving authority. The effective date was subsequently changed to Jan. 1, 1941. This act also specified that, for the purposes of the approving authority, schools approved by the American Osteopathic Association and schools approved by the American Medical Association would receive the same consideration. At the last session of the legislature, apparently, the *New England Journal of Medicine* stated, because they feared that the approving authority never would approve osteopathic schools, the osteopaths introduced legislation to set up an osteopathic board of registration, but the bill was withdrawn. Finally, at the suggestion of the Committee on Education of the legislature, a compromise bill was drawn and finally passed. The bill states that the approving authority shall be increased from three to five members, one member being the osteopathic member of the board of registration in medicine, who shall be a graduate of a school approved by the American Osteopathic Association and by the approving authority, and the other a layman.

MICHIGAN

New Director of Health Service.—Dr. John K. Altland, Hastings, director of the Barry County Health Department for more than five years, has resigned, effective April 1, to become director of the bureau of local health service of the Michigan Department of Health. Dr. Altland fills the position that was vacant when Dr. Eldred V. Thiehoff, Lansing, resigned to become health commissioner of Peoria, Ill. (THE JOURNAL, March 16, p. 725).

Personal.—Dr. Edwin D. MacKinnon, Saginaw, and Dr. Louis J. Gariepy, Detroit, were on February 27 appointed members of the Michigan State Board of Registration in Medicine, succeeding Drs. Eugene S. Thornton, Muskegon, and Harold L. Morris, Detroit.——Dr. George D. Woodward has resigned, effective March 15, as superintendent of the Sault Ste. Marie State Hospital, Sault Ste. Marie. Dr. Thomas W. Thompson, Traverse City, assistant superintendent of the Traverse City State Hospital, will be acting superintendent at Sault Ste. Marie.

Physician Honored.—Dr. Mary Margaret Frazer, Detroit, was chosen "The Woman of the Year of 1945" by the Soroptimist Club, a group of professional business women in Detroit. Dr. Frazer was selected for her work in organizing and serving as medical director of a cancer detection clinic in the city. Each year the club honors the "woman who has made the greatest and most important contribution to the economic advancement of women in Metropolitan Detroit." The cancer clinic, organized by Dr. Frazer, is for women only and is sponsored by the Detroit Federation of Women's Clubs.

Quarantine Regulations Amended.—Quarantine regulations were removed from five communicable diseases by unanimous vote of the Michigan State Council of Health on March 13. If the patient is isolated no quarantine will be enforced on members of the household for scarlet fever, meningococcic meningitis, poliomyelitis, measles and chickenpox. This change in Michigan's regulations for the control of communicable diseases goes into immediate effect. Quarantine will be required only for smallpox and diphtheria. The council also included streptococcic infections of the nose or throat under the regulations governing scarlet fever.

MISSOURI

Lecture Honors George Dock.—The St. Louis Society of Internal Medicine offered a special program March 19 to honor Dr. George Dock, Altadena, Calif., who during his career has been professor and head of the department of internal medicine at the Universities of Michigan, Tulane and Washington and professor of pathology at the University of Texas. The event featured a lecture by Dr. Thomas Francis Jr., professor and chairman of the department of epidemiology, University of Michigan School of Public Health, Ann Arbor, on "Influenza: Its Distribution and Control." The weekly *Bulletin* of the St. Louis Medical Society states that Dr. Dock, while at Washington University, not only left his mark as a teacher but aided in no small degree the development of the medical library of the university and the St. Louis Medical Society.

NEW JERSEY

Dinner for Harrison Martland—Annual Lecture.—On April 10 Dr. Harrison S. Martland, since 1925 medical examiner of Essex County, will be honored at a dinner given by the Essex County Pathological and Anatomical Society. The event will precede the Harrison S. Martland Lecture to be given by Selman A. Waksman, Ph.D., New Jersey Agricultural Experiment Station, Rutgers University, New Brunswick, on "Antibiotics, with Special Reference to Streptomycin." The lecture was established in 1935 by the Essex County Pathological and Anatomical Society, of which Dr. Martland is a past president. He is also professor of forensic medicine at the New York University College of Medicine, New York, director of the Graduate Fortnight of the New York Academy of Medicine and an associate editor of the *American Journal of Surgery*.

NEW YORK

Executive Director Chosen for Hospital Council.—Dr. Albert D. Kaiser, health officer of Rochester, has been named executive director of the newly created Council of Rochester Regional Hospitals which was established in a five year agreement with the Commonwealth Fund (THE JOURNAL, March 23, p. 804). Dr. Kaiser will continue his position as health officer but will immediately take over the direction of the experimental regional hospital and medical project. Dr. Paul A. Lembcke, Rochester, formerly state district health officer in Rochester, will serve as medical associate, effective April 1. Charles M. Royle has been named business manager but will continue in his position as executive manager of the Rochester Hospital Council.

Expanded Program in Optics.—Gifts totaling $150,000 from the Eastman Kodak Company and the Bausch and Lomb Optical Company will support new developments in teaching and research at the Institute of Optics, University of Rochester, it was announced March 15. A part of the program includes the appointment of Brian O'Brien, Ph.D., to the newly created post of research professor of physics and optics, the first research professorship at the university. The enlarged program of the Institute of Optics is in addition to the plans for expanding the department of physics, announced March 14, for which $550,000 has been appropriated by the university for additions to building and equipment for the department. The two programs in physics and optics will be coordinated under the administrative direction of Lee A. DuBridge, Ph.D., professor and chairman of the physics department. Dr. O'Brien, who has been director of the institute since 1938, will devote most of his time to important research projects. He joined the university staff in 1930 as professor of physiologic optics. The new funds for the Institute of Optics were given by the Eastman Kodak Company under a 1945 contribution of $100,000 and by the Bausch and Lomb Optical Company, which is providing $50,000. Both companies assisted in founding the institute in 1929 with financial support and technical assistance. In 1934 the university assumed entire financial responsibility, but Eastman Kodak and Bausch and Lomb continued their interest by having representatives on the board of advisers. The institute is said to be the only one of its kind in this country and one of the few in the world offering work in optics which approaches in scope and completeness that given at the university.

New York City

University News.—The Association of the Alumni, Columbia University College of Physicians and Surgeons, elected Dr. Bernard S. Oppenheimer president during its annual meeting in New York, March 2. Dr. Charles C. Lieb was named secretary. Major Gen. William J. Donovan and Dr. Willard C. Rappleye, dean of the medical school, spoke at the dinner, at which Dr. John J. H. Keating, outgoing president of the association, was toastmaster.

Personal.—Dr. Emery A. Rovenstine, professor of anesthesia at New York University College of Medicine, will, through the devotion of former Bellevue Hospital residents who have served under him, have his name permanently inscribed on a seat in Alumni Hall, the auditorium of the university's proposed new medical center. A committee of former residents, headed by Dr. Solomon G. Hershey, collected $1,100 for the Alumni Hall Fund in honor of Dr. Rovenstine. ——Dr. Robert R. Cadmus, recently released from service in the army, has been named director of the Vanderbilt Clinic.

Residencies and Fellowships in Physical Medicine.—Columbia University College of Physicians and Surgeons announced that the first group of residents to be appointed in its program of teaching and research in physical medicine will not be assembled for the introductory course until about May or June. The announcement describing the program appeared in THE JOURNAL March 2, page 591, and indicated that first appointments would be made by March 1. The recent announcement from the university indicates that there are still vacancies in the residencies in physical medicine at some of the hospitals cooperating in the program and that the introductory course will be given as soon as men with proper qualifications are assembled. Applications are also being considered for the following year.

Grants to Long Island College.—Gifts and grants totaling $143,437 were made to the Long Island College of Medicine, Brooklyn, during the year ended January 1, exceeding by $16,063 contributions received during the previous year. These contributions, not including increments in the endowment of the college, fall into six categories: general, $84,066; memorials and scholarships, $2,503; teaching, $21,904; research, $23,173; fellowships, $2,000, and prizes, $75. The development fund, from which a total of $63,662 was utilized during the calendar year 1945, represents the largest amount received. The Commonwealth Fund gave the second largest amount. It contributed $20,304 to the department of psychiatry. To establish this department the Commonwealth Fund made a six year grant, which started in 1943 with a contribution of $5,112. This department, named after the late Dr. William Alanson White, graduate of the college in the class of 1891, is now located in a new building at 88 Amity Street.

OHIO

Special Program for Child Health Day.—The Academy of Medicine of Cleveland, Western Reserve University School of Medicine, Cleveland, and the division of health of Cleveland are cooperating in a refresher course in obstetrics and pediatrics at the Cleveland Academy of Medicine, April 29-May 1, in observance of National Child Health Day. Additional information can be obtained from Dr. Arthur W. Thomas, Room 27, City Hall, Cleveland 14.

Penicillin and Tooth Decay.—About 1,000 boys in a large industrial school in the East will be the subjects of an experiment by Thomas J. Hill, D.D.S., professor of clinical oral pathology, Western Reserve University School of Medicine, Cleveland, to test the use of penicillin as a means of eradicating tooth decay. Dr. Hill will conduct the work for a year or more, starting about July 1. The selected group have been the subjects in short surveys at Western Reserve. This experiment included the mixture of penicillin wtih tooth powder.

Postgraduate Assembly.—The eighteenth postgraduate assembly of the Mahoning County Medical Society will be conducted at the Pick-Ohio Hotel in Youngstown, April 17, by the following members of the staff of Johns Hopkins University School of Medicine, Baltimore:

Dr. William F. Reinhoff Jr., associate professor of surgery.
Dr. Charles W. Wainwright, associate in medicine.
Dr. Leroy M. Polvogt, associate professor of laryngology and otology.
Dr. Raymond E. Lenhart, associate in orthopedic surgery.
Dr. Houston S. Everett, associate professor of gynecology.

TENNESSEE

State Medical Meeting.—The Tennessee State Medical Association will hold its 1946 session at the Hotel Andrew Johnson, Knoxville, April 9-11, under the presidency of Dr. William C. Chaney, Memphis. Among the out of state speakers will be:

Dr. Robert A. Arens, Chicago, Radiologic Survey of the Urinary Tract—Excretion Urography.
Dr. Hughes Kennedy, Jr., Birmingham, Ala., Obstetric and Pediatric Meddling.
Dr. W. W. Bauer, Chicago, Health Education Today and Tomorrow.
Mr. James Stegen, Chicago, Showdown on Political Medicine.
Mr. George Bugbee, Chicago, Benefits of the Hill-Burton Bill, S. 191.
Dr. Roger I. Lee, Boston, President, American Medical Association, The American Medical Association—What, Who and Why.

The woman's auxiliary to the association and the Texas State Pediatric Society will also meet.

VIRGINIA

Changes in Health Personnel.—Dr. William Grossmann, Richmond, director of the bureau of communicable diseases of the Virginia State Department of Health, has resigned, effective April 1, to take a postgraduate course in medicine at the University of Virginia Department of Medicine, Charlottesville. Dr. Harry H. Henderson, Richmond, assistant epidemiologist, has resigned, effective April 1, to take a postgraduate course in medicine at the Medical College of Virginia, Richmond. Dr. Edward M. Holmes Jr., Richmond, resumed his position as director of the division of venereal diseases, effective March 15. He recently was released from the army.

John Huff Named to New Position.—Dr. John M. Huff, U. S. Navy, retired, on March 7 was appointed superintendent of public health of Norfolk in a newly created separate department of public health which was set up, effective March 15. The city's bureau of public health was a part of the department of public welfare but became the department of public health March 15 as the result of an ordinance adopted by the city council. Dr. Albert L. Chapman, U. S. Public Health Service, has been acting commissioner of health of Norfolk, following the resignation of Dr. John C. Sleet, who retired December 31.

Stuart McGuire Lectures and Graduate Clinic.—The Stuart McGuire Lecture series and the Spring Postgraduate Clinic of the Medical College of Virginia, Richmond, were presented in cooperation with the department of clinical education, Medical Society of Virginia, March 7-8. Dr. Elmer L. Sevringhaus, Nutley, N. J., gave both lectures, on the clinical endocrinology of the female and male sex hormones. A symposium on chemotherapy and antibiotics was the theme of the graduate program with the following speakers:

Dr. Harrison F. Flippin, Philadelphia, Cardinal Principles of Sulfonamide and Antibiotic Therapy.
Dr. Harvey B. Haag, Richmond, Va., Absorption of Sulfonamides from Local Application.
Dr. Isaac A. Bigger, Richmond, Clinical Experience with Local Use of Sulfonamides.

State Society Appoints Public Relations Director.—Mr. Henry S. Johnson, Hylas, has been appointed director of public relations of the Medical Society of Virginia, effective March 15, with offices at the headquarters of the society, Richmond. Mr. Johnson will contact the physicians of the state, giving them information as to medical, surgical and hospital service plans and aiding in the development and establishment of such plans. In addition he will inform the public as to the benefits of such plans and services. A broad constructive program for medical care has been instituted. Mr. Johnson will be available not only to the local medical societies throughout the state but to local civic groups and organizations for discussion of plans to inaugurate services and to assist in the development of such plans as will provide expansion of medical services. Mr. Johnson once served as supervisor of vocational rehabilitation of the Virginia State Department of Education and during 1944-1945 was state representative of the National Foundation for Infantile Paralysis.

WASHINGTON

Smallpox Outbreak—Five Deaths.—On March 29 five deaths had occurred in an outbreak of smallpox in Seattle. Newspapers reported that the infection came from Japan. The army placed a strict smallpox quarantine on the 2,508 soldiers and crew members of the army transport *Marine Devil* March 31 when it arrived in San Francisco from Korea with 2 cases of the infectious disease aboard. Port of embarkation officials said that all precautions were being taken "for the protection of the public" to prevent possible further spread of the oriental black smallpox epidemic which has theatened the entire Pacific Coast. The disease was believed brought to this country by servicemen returning from the Pacific. The *Marine Devil* was detained at a special anchorage in San Francisco Bay, where passengers, mostly soldiers returning for discharge, will be held under quarantine until April 7. The navy transport *LaSalle*, carrying 1,400 service men, is quarantined at San Francisco after bringing a smallpox case from the Pacific, it was said. On April 1 the fire stations in Seattle were to be manned with doctors and attendants in an effort to vaccinate 50,000 persons daily; 15,000 persons were being vaccinated each day at the time of this report. Canada has barred all persons traveling from Seattle to Victoria, B. C., by boat who are unable to show a vaccination certificate. In San Francisco at least half the population has been vaccinated, it was stated.

WEST VIRGINIA

State Society Activities.—Dr. Alonzo R. Sidell, Williamstown, has been appointed a member of the council of the West Virginia State Medical Association to succeed Dr. Curtis P. Artz, Grantsville, who resigned when he accepted a three year residency in surgery at Ohio State University Hospital, Columbus. The following doctors have been elected by the council of the association as honorary life members: Benjamin M. Stout, Morgantown; William M. Riley, Lillybrook; Robert Wriston, Beckley; Ralph C. Mitchell, Sabine, and Lonzo E. Steele, Logan. At a meeting held at Parkersburg late in February the council unanimously adopted a resolution calling on the Public Health Council to waive the requirement of an

academic degree by applicants for licensure by reciprocity who served in the armed forces during World War II. The regulations now require that such applicants must have completed two years of academic work of collegiate grade in a standard college of arts and sciences of equal rank with the college of arts and sciences at West Virginia University.

GENERAL

New Head of Oxford Press Medical Department.—Russell I. Garton has been named to succeed Frederick F. Randolph as head of the medical department of Oxford University Press, New York and London, effective April 1.

Pan American Congress of Pediatrics.—The first Pan American Congress of Pediatrics is now being planned for New York City late in 1948. Dr. Jay I. Durand, Seattle, is chairman of the organization committee and Dr. Felix A. Hurtado Galtes, Havana, Cuba, associate chairman.

Examinations for Fellowship for College of Chest Physicians.—The next oral and written examinations for fellowship in the American College of Chest Physicians will be held at San Francisco on June 29. Applicants should communicate with the Executive Secretary, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10.

Personal.—Dr. Ashley W. Oughterson of the Army Institute of Pathology, Washington, has been named executive vice president of the American Cancer Society. Colonel Oughterson, recently medical aide to General Douglas MacArthur and formerly clinical professor of surgery at Yale University School of Medicine, New Haven, Conn., will serve as medical and scientific director in his new post.

Credentials Lost.—Dr. Horace P. Stimson, Chicago, announced the loss of his diploma from Harvard Medical School, Boston, dated June 22, 1922, also his diploma from Amherst College dated June 5, 1918, his medical license of 1924 from the state of Maine and his license of 1926 from the state of Florida. Dr. Stimson reports that the loss occurred in the course of moving and storage in the past four years while he was on active duty in the medical corps of the U. S. Naval Reserve.

New Officers of National Health Council.—Mr. Philip R. Mather, Boston, was elected president of the National Health Council at its meeting March 22 at the Hotel Commodore, New York. Ira V. Hiscock, Sc.D. New Haven, was named vice president and Dr. Reginald M. Atwater, New York, secretary. Louis I. Dublin, Ph.D., New York, has been elected chairman of the citizens planning committee of the National Health Council, Mr. Albert Lasker vice chairman and Dr. Howard A. Rusk, New York, secretary.

International College of Surgeons.—The International College of Surgeons, United States Chapter, will hold its eleventh assembly and convocation in Detroit, October 21-23. Surgical clinics in Detroit hospitals will feature the first morning of the assembly. Thereafter all the meetings, the convocation and the exhibition will be held in the Masonic Temple. The Detroit Statler and the Book-Cadillac will be hotel headquarters. Additional information may be obtained from Dr. Louis J. Gariepy, executive secretary, 16401 Grand River Avenue, Detroit.

Surgeons Plan Clinical Congress.—The American College of Surgeons will hold its thirty-second clinical congress at the Waldorf-Astoria, New York, September 9-13, the first congress since the meeting in Boston in 1941. Since the last session 2,744 surgeons have been received into fellowship in absentia. Officers, regents and governors have remained in office since 1941 because of the cancellation of annual meetings of the fellows. Special interest will also therefore be attached to the installation of the officers-elect, headed by Dr. Irvin Abell, Louisville, Ky., chairman of the board of regents, as president. Dr. William Edward Gallie, Toronto, who has been president since November 1941, will give the address at the presidential meeting and convocation on the evening of September 9 in the Grand Ballroom of the Waldorf-Astoria. The address of the American College of Surgeons is 40 East Erie Street, Chicago 11.

Francis Dieuaide Named Scientific Director of the Insurance Research Fund.—Dr. Francis R. Dieuaide, recently chief of the tropical disease treatment branch of the Surgeon General's Office of the army, has been named scientific director of the Life Insurance Medical Research Fund, it was announced March 28. Dr. Dieuaide, who received the Legion of Merit for his supervision of the treatment of malaria and other tropical diseases in the army, is now on terminal leave with the rank of colonel. He assumed his duties with the Life Insurance Fund on April 1. Before going into the medical corps in 1943 Dr. Dieuaide was clinical professor of medicine at Harvard Medical School, Boston, a post which he is resigning. The Life Insurance Medical Research Fund was established last year to make grants to universities and medical schools for research on diseases of the heart and related diseases. The fund plans to make grants of more than $3,000,000 for this purpose over the next five years. A total of 147 life insurance companies in this country and Canada are supporting the fund (THE JOURNAL, January 12, p. 100). Coincident with the announcement of Dr. Dieuaide's appointment Mr. Albert Linton, chairman of the fund, announced that directors of the fund had approved a new series of grants totaling $310,000 in support of research work on diseases of the heart and related diseases at twenty-seven institutions in this country and in Canada. This action brings the total of grants made since the fund was organized to $436,000. Other applications are still under consideration. As scientific director, Dr. Dieuaide will investigate the applications for funds and make recommendations to the group's advisory council. The new grants made by the fund represent a total of thirty-four specific allocations to institutions and research workers. Five of the grants are for studies on arteriosclerosis and coronary disease, four for studies on hypertension, three for studies on kidney diseases and five for research on rheumatic fever. Nine of the studies are concerned with fundamental physiologic problems, and eight are for basic chemical and pharmacologic studies of the circulation. Dr. Dieuaide graduated at Johns Hopkins University School of Medicine, Baltimore, in 1920. He specialized in internal medicine and heart disease at Johns Hopkins and abroad and was an associate in medicine at Johns Hopkins until 1924. For the ensuing fifteen years Dr. Dieuaide was with the Peiping Union Medical College, an institution founded and supported by the Rockefeller Foundation at Peiping, China, as professor and head of the department of medicine. He joined the faculty of Harvard Medical School, Boston, on his return to this country in 1939.

LATIN AMERICA

Health Activities in Latin America.—*Congress of Neurosurgery.*—The second South American Congress of Neurosurgery will be held in Santiago, Chile, in April 1947. The program will be divided into three discussions, hydrocephalus, histology in brain tumors in relation to clinical findings, and brain abscess. Dr. Alfonso Asenjo is secretary.

Laboratory Physicians Form Society.—The Cuban Society of Clinical Laboratory Physicians was formed recently with the following officers among others: Dr. Antonio Sellek Azzi, president; Dr. Emilio Garcia Pérez, vice president; Dr. Luis Torra Cabarroca, secretary; Dr. Emilio Unanue Pérez, treasurer.

Personal.—Dr. Ernest B. Howard, Boston, former director of the division of venereal disease control of the Massachusetts Department of Public Health, has taken up duties as chief of the Institute of Inter-American Affairs health and sanitation field party in Peru.——Dr. Robert M. Mein, Wichita Falls, Texas, recently relieved from active duty by the War Department, was to leave the United States in late January or early February for Brazil. Dr. Mein will serve as medical officer in Belem, Brazil, succeeding Major Hyman Zukerman, who recently returned to the United States for discharge from the army. Dr. Mein's family will accompany him.——Dr. Paul H. Harmon, Huntington, W. Va., addressed the Colegio Medico de El Salvador, March 20-21. Dr. Thomas D. Masters, Springfield, Ill., also spoke, on "Water Balance."

Rabies Epidemic in Ecuador.—The Ecuadorean government has launched an extensive campaign against rabies, a press report indicates. Dr. Gonzalo Cardenas is in charge of the work. It is reported that more than 16,000 dogs in Quito alone have been killed, while throughout the republic at least 40,000 dogs have been killed. The press report stated that while dogs and sheep are dying in large numbers only 400 human beings were known to have died of rabies at the time the physician was interviewed.

CORRECTION

New Absorbable Surgical Dressing.—The third reference accompanying the current comment with this title in THE JOURNAL, February 16, page 414, was incorrectly given and should have been Frantz, Virginia Kneeland, and Lattes, Raffaele: Oxidized Cellulose—Absorbable Gauze, J. A. M. A. **129**:798 (Nov. 17) 1945.

Deaths

Fred M. Smith ✠ noted internist of Iowa City, died February 23, aged 57, of coronary occlusion.

Dr. Smith was born in Yale, Ill., May 29, 1888. He received his B.S. at the University of Chicago in 1913, graduated at Rush Medical College in 1914 and served his internship at the Presbyterian Hospital, Chicago. Dr. Smith was a member of the staff at Rush Medical College from 1916 to 1924, serving as assistant, associate and instructor in medicine and assistant professor of clinical medicine. He went to the State University of Iowa College of Medicine, Iowa City, in 1924 as professor of the theory and practice of medicine and head of the department, a position he held at the time of his death.

Dr. Smith served as first lieutenant in the medical corps of the army in 1918. He had been a member of various national and local groups, including the American College of Physicians, American Society for Clinical Investigation, American Physiological Society, Society for Experimental Biology and Medicine, Chicago Institute of Medicine and the Chicago Society of Internal Medicine, and a specialist certified by the American Board of Internal Medicine. He was secretary of the Section on the Practice of Medicine of the American Medical Association from 1937 to 1940, when he became chairman for a year. He was also a member of the House of Delegates from the Section on the Practice of Medicine from 1944 to 1945. He wrote "The Coronary Arteries" in Cyclopedia of Medicine in 1932 and "Diseases of the Heart" in the textbook of medicine by Musser as well as numerous medical articles. He was editor in chief of the *American Heart Journal.*

Rachelle S. Yarros, La Jolla, Calif.; Woman's Medical College of Pennsylvania, Philadelphia, 1893; born in Russia, May 18, 1869; professor of social hygiene emeritus at the University of Illinois College of Medicine in Chicago, where she had been associate professor of obstetrics; fellow of the American College of Surgeons; formerly obstetrician at the Chicago Lying-In Hospital and Dispensary and consultant for the U. S. Public Health Service; for ten years at the West Side Hospital Dispensary in Chicago; served in the woman's division of the Illinois Council of National Defense during World War I, chairman of the Social Hygiene Council in Chicago and secretary of the Illinois Social Hygiene League; honorary member of the American Social Hygiene Association; author of "Modern Woman and Sex"; died March 17, aged 76, of heart disease.

Samuel Laban Ledbetter Jr. ✠ Birmingham, Ala.; Johns Hopkins University School of Medicine, Baltimore, 1910; born in Birmingham in 1886; past president of the Jefferson County Medical Society; professor of clinical surgery at the Medical College of Alabama; member of the founders group of the American Board of Surgery; member of the Southern Surgical Association; fellow and member of the board of governors of the American College of Surgeons; served as vice president of the Southern Surgical Association; on the staffs of the St. Vincent's, Children's and Hillman hospitals; at one time clinical assistant in surgery at Western Reserve University School of Medicine, Cleveland, died March 10, aged 60, of a tumor.

Howard E. Jones ✠ Circleville, Ohio; Medical College of Ohio, Cincinnati, 1876; born in 1853; taught physiology at Columbus Medical College for six years and later lectured on physiology at Kenyon College; past president and vice president of the Pickaway County Medical Society; on the staff of the Berger Hospital; a co-founder of the Ohio History Day Association; author of "Nests and Eggs of Birds of Ohio"; surgeon for the Pennsylvania Railroad, Norfolk and Western Railroad and the Chesapeake and Ohio Railroad; died December 12, aged 92, of senility.

Joseph de Benneville Abbott, Bristol, Pa.; Hahnemann Medical College and Hospital of Philadelphia, 1887; at one time medical examiner in the local public schools; died January 18, aged 79, of arteriosclerosis and myocardial failure.

Geza Manuel Aczel ✠ Cincinnati; Magyar Királyi Pázmány Petrus Tudomanyegyetem Orvosi Fakultasa, Budapest, Hungary, 1909; died January 16, aged 63, of coronary thrombosis.

Morgan Kime Adams, Atascadero, Calif.; College of Medical Evangelists, Los Angeles, 1939; interned at the Los Angeles County Hospital, Los Angeles; began active duty as a first lieutenant in the medical corps, Army of the United States, on Nov. 1, 1940; later promoted to captain; served with the Third Division in the European Theater and in North Africa, receiving the Silver Star for heroic service in Sicily; relieved from active duty in April 1945; died in Riverside December 2, aged 30, of pneumonia.

Walter Henderson Allyn ✠ Waverly, Ill.; Barnes Medical College, St. Louis, 1902; formerly mayor of Waverly; served during World War I and on the grade and high school boards of education; member of the visiting staffs of the Passavant Memorial Hospital and Our Saviour's Hospital, Jacksonville, where he died January 3, aged 70, of mesenteric thrombosis.

Charles Frederick Attwood ✠ Topeka, Kan.; Kansas Medical College, Medical Department of Washburn College, Topeka, 1906; died in Kansas City, Kan., December 25, aged 63, of coronary occlusion.

Albert J. Auro ✠ Brooklyn; Regia Università di Napoli Facoltà di Medicina e Chirurgia, Italy, 1923; on the staff of St. Catherine's Hospital, where he died January 1, aged 47, of pneumonia.

Jacob Valentine Baker, Edinburg, Ind.; Hospital College of Medicine, Louisville, Ky., 1898; member of the American Medical Association; died in the Bartholomew County Hospital, Columbus, January 11, aged 76, of injuries received when the automobile in which he was driving was struck by a truck.

William Evan Baker ✠ Genoa, Ill.; Harvey Medical College, Chicago, 1904; past president of the Aux Plaines Branch of the Chicago Medical Society; for many years school physician in Genoa; on the staff of the Sycamore (Ill.) Hospital; died January 27, aged 82, of coronary occlusion.

Samuel Ralston Bates, Wagoner, Okla.; Vanderbilt University School of Medicine, Nashville, Tenn., 1897; member of the American Medical Association; served as president of the Wagoner County Medical Society; died January 11, aged 73, of valvular heart lesion and pulmonary tuberculosis.

Glenn Day Batten ✠ Jackson, Tenn.; University of Tennessee College of Medicine, Memphis, 1933; fellow of the American College of Surgeons; served as vice president of the Tennessee State Medical Society; past president of the Madison County Medical Society; one of the founders and owners of the Doctors Hospital; on the staff of the Western State Hospital, Bolivar; died January 6, aged 42, of lobar pneumonia.

James E. Brittain, Searcy, Ark. (licensed in Arkansas in 1903); died December 12, aged 73, of cardiovascular renal disease.

Robert Henry Burke ✠ St. Johnsbury, Vt.; the Hahnemann Medical College and Hospital, Chicago, 1902; health officer; member of the board of directors of the Brightlook Hospital; died December 1, aged 71, of carcinoma of the prostate.

Henry Herbert Clark, Woodbury, N. J.; University of Pennsylvania Department of Medicine, Philadelphia, 1891; county physician; died December 31, aged 76, of chronic bronchitis and myocarditis.

Benita Coolidge Davenport ✠ Middleton, Mass.; Boston University School of Medicine, 1930; member of the American Sanatorium Association, American Trudeau Society and the National Tuberculosis Association; diplomate of the National Board of Medical Examiners; served as senior physician to the Essex Sanatorium, where she died December 20, aged 57, of pulmonary tuberculosis.

Denias Dawe, Monroe, Mich.; University of Michigan Homeopathic Medical School, Ann Arbor, 1889; served as mayor of Monroe, state senator and member of the state house of representatives; died December 21, aged 86, of hypostatic pneumonia and diabetes mellitus.

Nicholas Daniel Drummey ✠ Boston; Harvard Medical School, Boston, 1887; an Affiliate Fellow of the American Medical Association; consultant on the staff of the Faulkner Hospital; died in Brookline December 17, aged 80, of arteriosclerosis.

Julius Karl Egge, Newark, N. J.; University of the City of New York Medical Department, 1890; also a graduate in pharmacy; an organizer and first secretary of the New Jersey College of Pharmacy; on the staff of St. Michael's Hospital; died December 19, aged 89, of arteriosclerotic heart disease and senility.

Anthon Flath, Stanley, N. D.; Trinity Medical College, Toronto, Ont., Canada, 1892; Victoria University Medical Department, Coburg, Ont., 1892; county health officer; died December 4, aged 82, of cardiac decompensation.

Andrew M. Flynn, Tacoma, Wash.; John A. Creighton Medical College, Omaha, 1904; member of the American Medical Association; on the staffs of the Tacoma General Hospital and St. Joseph's Hospital, where he died December 28, aged 73, of cerebral hemorrhage and arteriosclerosis.

Lee McCloskey Goodman ✠ Jersey Shore, Pa.; Jefferson Medical College of Philadelphia, 1904; served in France during World War I; past president of the Lycoming County Medical Society; medical examiner for the Equitable Life Insurance Company; died recently, aged 64, of coronary occlusion.

James Joseph Goodwin, Clinton, Mass.; Jefferson Medical College of Philadelphia, 1892; member of the American Medical Association and the New England Surgical Society; fellow of the American College of Surgeons; surgeon, Clinton Hospital; consulting surgeon, Community Memorial Hospital, Ayer; died December 29, aged 80, of cerebral hemorrhage.

Francis Walter Gravelle, New York; Queen's University Faculty of Medicine, Kingston, Ont., Canada, 1911; member of the American Medical Association; fellow of the American College of Surgeons; attending obstetrician, Misericordia Hospital; director of obstetrics, St. Clare's Hospital, where he died recently, aged 59, of leukemia.

Augustus Clarkson Grove, Cadiz, Ohio; Starling Medical College, Columbus, 1889; served as coroner of Hamilton County and as director of the First National Bank in Jewett; died December 22, aged 81, of arteriosclerosis.

Karl Lowell Hayes, Farmersville, Ill.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1906; served during World War I; on the staffs of St. John's and Memorial hospitals, Springfield and St. Francis Hospital, Litchfield; died December 14, aged 63, of heart disease.

John Simon Jorczak, Chicopee, Mass.; College of Physicians and Surgeons, Boston, 1931; member of the draft board during World War II; died in Springfield December 25, aged 53, of coronary thrombosis.

Julius Eugene Kinney, Denver; University of the City of New York Medical Department, New York, 1885; member of the American Medical Association; died November 22, aged 89, of cardiovascular renal disease and prostatic hypertrophy.

William Adolph Kluegel, St. Louis; Washington University School of Medicine, St. Louis, 1908; member of the American Medical Association; at one time coroner of Perry County; member of the honorary staff of the Lutheran Hospital, where he died December 16, aged 62, of cardiac decompensation.

Francis Valentine Langenderfer ✠ St. Paul; Chicago College of Medicine and Surgery, 1907; on the staffs of the Bethesda Hospital, St. Luke's Hospital and St. Joseph's Hospital, where he died November 26, aged 60, of hypertensive heart disease.

Jacob Lattman ✠ New York; Columbia University College of Physicians and Surgeons, New York, 1917; served on the staff of the Willard Parker Hospital; died in the Mount Sinai Hospital December 18, aged 56, of metastatic carcinoma of the brain.

William Patrick Lawler, Lowell, Mass.; College of Physicians and Surgeons, Baltimore, 1886; member of the American Medical Association; past president of the Middlesex North District Medical Society; formerly a member of the local board of health and city physician; for many years on the staff of St. John's Hospital; died December 7, aged 86, of coronary occlusion.

Thomas Welford Lear, Coshocton, Ohio; Eclectic Medical Institute, Cincinnati, 1894; member of the American Medical Association; died in a local hospital recently, aged 74, of bronchopneumonia.

Edward De Witt Leonard ✠ Newton, Mass.; Harvard Medical School, Boston, 1913; fellow of the American College of Surgeons; on the staff of the Newton Hospital, where he died December 15, aged 60, of hypertensive heart disease.

Roscoe Conklin Leinbach ✠ Onaga, Kan.; University Medical College of Kansas City, Mo., 1907; president of the Pottawatomie County Medical Society; chairman of the county medical examining board during World War II; surgeon for the Union Pacific Railroad; died December 21, aged 61, of coronary thrombosis.

Oswald Henry Magaret, Papillion, Neb.; St. Louis College of Physicians and Surgeons, 1899; Omaha Medical College, 1900; served during World War I and as a member of the board of education; died December 28, aged 68, of coronary thrombosis.

Samuel Lee Magness, Baltimore; University of Maryland School of Medicine, Baltimore, 1902; served on the staff of St. Joseph's Hospital; died in Rock Hall November 27, aged 67, of cerebral hemorrhage.

Charles Henry Mason, Superior, Wis.; Minneapolis College of Physicians and Surgeons, 1899; member of the American Medical Association; past president of the Douglas County Medical Society; formerly city health officer; served as chief of staff at St. Joseph's Hospital, St. Mary's Hospital and St. Francis Hospital; past president and honorary member of the Rotary Club; died December 30, aged 72, of paralysis agitans.

Andrew Patterson McArthur, Moss Point, Miss.; Medical College of Alabama, Mobile, 1885; member of the American Medical Association; on the staff of the Jackson County Hospital, Pascagoula; died December 5, aged 83, of bronchopneumonia and cardiorenal disease.

Mary Elizabeth McMenamy, Brooklyn; University and Bellevue Hospital Medical College, New York, 1925; died in Danville, Va.; December 24, aged 47, of a tumor.

Douglas Gordon Meighen ✠ Tampa, Fla.; Vanderbilt University School of Medicine, Nashville, Tenn., 1923; for many years associated with the U. S. Public Health Service; formerly county physician; district surgeon for the Atlantic Coast Line Railroad; died in the Municipal Hospital December 3, aged 47, of cardiac decompensation.

Jacob Edward Meisenbach ✠ Staplehurst, Neb.; University of Nebraska College of Medicine, Omaha, 1904; served as president of the Seward County Medical Society; died in St. Elizabeth's Hospital, Lincoln, December 9, aged 69, of myocardial infarct.

Casper Otto Miller, New Market, Va.; University of Virginia Department of Medicine, Charlottesville, 1880; University of the City of New York Medical Department, New York, 1881; member of the American Medical Association; member of the state house of delegates, 1913-1914; died December 16, aged 88, of cerebral hemorrhage.

Julius Shuford Mitchell, Rome, Ga.; Vanderbilt University School of Medicine, Nashville, Tenn., 1894; died December 28, aged 72, of heart disease.

John H. Morrow, Merna, Neb.; Lincoln Medical College of Cotner University, 1902; member of the American Medical Association; died December 10, aged 73, of gastric hemorrhage.

Serenus Lazarus Newman ✠ New York; Columbia University College of Physicians and Surgeons, New York, 1901; associate in obstetrics at the Beth Israel Hospital, where he died December 28, aged 68, of pulmonary embolism.

James Harper North Jr., New York; University of the City of New York Medical Department, New York, 1887; for many years associated with the New York Life Insurance Company; died December 1, aged 81, of coronary arteriosclerosis and thrombosis.

William Lucas Perry, St. Louis; Eclectic College of Physicians and Surgeons, Indianapolis, 1891; also a minister; died in December, aged 82, of coronary occlusion.

Roy Elliott Peters, Wymore, Neb.; Loyola University School of Medicine, Chicago, 1916; served as city and county physician; on the staff of the Lutheran Hospital in Beatrice; died in the Lincoln (Neb.) General Hospital, November 29, aged 60, following an operation for intestinal obstruction.

I. C. Power, Hiram, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1906; died November 16, aged 69, of carcinoma of the stomach.

George Richard Randall, Milwaukee; Queen's University Faculty of Medicine, Kingston, Ont., Canada, 1905; member of the American Medical Association; served during World War I; died in the Veterans Administration Facility December 12, aged 63, of coronary occlusion.

Charles William Robinson ✠ Atchison, Kan.; Kansas Medical College, Medical Department of Washburn College, Topeka, 1913; past president of the Atchison County Medical Society; served as a member of the state board of health, city and county health officer and examiner for the U. S. Veterans Bureau; served during World War I; division surgeon for the Missouri Pacific Railroad; on the staff of the Atchison Hospital; died December 20, aged 55, of hypertensive cardiovascular disease.

Clarke Rogers, Indianapolis; Medical College of Indiana, Indianapolis, 1899; member of the American Medical Association; captain during World War I; member of the city board of health from 1933 to 1936 and in 1944; served on the city merit commission from 1941 to 1944; a trustee of the Soldiers' Home in Lafayette from 1920 to 1933; died December 21, aged 68, of coronary occlusion and cardiovascular disease.

Evan O. Shellhorse, Dalton, Ga.; Georgia College of Eclectic Medicine and Surgery, Atlanta, 1900; died November 19, aged 66.

Frank Siedenburg, Portsmouth, Ohio; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1907; member of the American Medical Association; since 1942 assistant medical examiner for the Norfolk and Western Railway; for many years on the staff of the Schirrman Hospital; died November 1, aged 65, of coronary occlusion.

Joseph Simecek, Swanton, Neb.; Rush Medical College, Chicago, 1894; member of the American Medical Association; died in the Misericordia Hospital, New York, November 2, aged 78, of cerebral thrombosis.

Frank Dale Smith ✠ Rochester, Minn.; University of Minnesota College of Medicine and Surgery, Minneapolis, 1905; died December 5, aged 64, of cerebral hemorrhage.

Lee Whitmore Smith ✠ Butte, Mont.; University of Minnesota Medical School, Minneapolis, 1916; specialist certified by the American Board of Otolaryngology; member of the Pacific Coast Oto-Ophthalmological Society; fellow of the American College of Surgeons; on the staff of the Murray Hospital; died November 18, aged 53.

William Spickers ✠ Paterson, N. J.; Columbia University College of Physicians and Surgeons, New York, 1906; born in Paterson, N. J., Aug. 17, 1883; fellow of the American College of Surgeons; past president of the Passaic County Medical Society; attending surgeon, Nathan and Miriam Barnert Memorial Hospital; attending thoracic surgeon, Bergen Pines Hospital, Oradell; consulting surgeon, Hackensack Hospital, Hackensack; died in Franklin Lakes December 28, aged 62, of coronary sclerosis and endocarditis.

John Adams Stanfield, Fort Worth, Texas; Vanderbilt University School of Medicine, Nashville, 1920; member of the American Medical Association; died in the Methodist Hospital November 4, aged 50, of acute bronchopneumonia.

Richard Francis Tobin ✠ Washington, D. C.; Georgetown University School of Medicine, Washington, 1905; died December 21, aged 73, of cardiovascular renal disease.

Fred Charles Tyree ✠ Agenda, Kan.; University of Kansas School of Medicine, Kansas City, 1906; died November 24, aged 62, of coronary occlusion.

Frederick Peterson Wainwright, Bridgeton, N. J.; Medico-Chirurgical College of Philadelphia, 1901; member of the American Medical Association; served as county physician, died December 14, aged 83, of cachexia and carcinoma of the lip.

Alex S. Wolf, St. Louis; Medizinische Fakultät Wien, Vienna, Austria, 1900; died December 1, aged 75, of acute pulmonary edema.

James Trenton Word, Sweet Home, Ark. (licensed in Arkansas in 1903); member of the American Medical Association; physician to the Arkansas Confederate Home; died December 1, aged 71, of heart disease.

Nathan Albert York ✠ Lisbon, Iowa; State University of Iowa College of Medicine, Iowa City, 1900; died in St. Petersburg, Fla., December 3, aged 79, of coronary occlusion.

Augustus G. Zimmerman ✠ Chicago; Kaiser-Wilhelms-Universität Medizinische Fakultät, Strassburg, Germany, 1899; at one time assistant professor of clinical surgery at the University of Illinois College of Medicine and associate clinical professor of surgery at the Loyola University School of Medicine; fellow of the American College of Surgeons; on the staffs of the Grant Hospital, St. Elizabeth's Hospital and the Alexian Brothers' Hospital, where he died December 20, aged 67, of glomerulonephritis.

CAPT. HARRY HERBERT FRIEDMAN
M. C., A. U. S., 1917-1945

LIEUT. GEORGE HARLEY MOSELEY III
(MC), U. S. Navy, 1915-1945

LIEUT. ARTHUR L. RICH,
M. C., A. U. S., 1917-1945

John Washington Thomason, East Point, Ga.; Southern College of Medicine and Surgery, Atlanta, 1912; Atlanta School of Medicine, 1913; member of the American Medical Association; died December 19, aged 65.

KILLED IN ACTION

Harry Herbert Friedman, Brooklyn; Georgetown University School of Medicine, Washington, D. C., 1943; interned at the Cumberland Hospital; diplomate of the National Board of Medical Examiners; began active duty as a first lieutenant in the medical corps of the Army of the United States in January 1944 and later promoted to captain; killed in action in Germany March 24, 1945, aged 27.

George Harley Moseley III ✠ Passed Assistant Surgeon, Lieutenant, U. S. Navy, Metropolis, Ill.; University of Illinois College of Medicine, Chicago, 1940; interned at the U. S. Naval Hospital in Mare Island, Calif.; commissioned an acting assistant surgeon, lieutenant (jg) in the U. S. Navy on Aug. 15, 1939; promoted to lieutenant; missing in action as of March 1, 1942, when the U. S. S. *Asheville,* on which he was serving, was reported lost as a result of enemy action in the Asiatic Area; aged 30; presumptive date of death Nov. 25, 1945, according to the Navy Department.

Arthur Lynton Rich, Great Neck, N. Y.; New York Medical College, Flower and Fifth Avenue Hospitals, New York, 1942; interned at the Morrisania City Hospital in New York; diplomate of the National Board of Medical Examiners; began active duty as a first lieutenant in the medical corps, Army of the United States, on Aug. 13, 1943; posthumously awarded the Bronze Star Medal "for heroic action in connection with military operations against the enemy from Feb. 28, 1945 to March 6, 1945 in Germany"; died in Germany March 7, 1945, aged 27, of wounds received in action.

Foreign Letters

LONDON

(From Our Regular Correspondent)

March 2, 1946.

British Medical Association Prepares to Fight the Government

The British Medical Association is preparing to fight the government if it should prove obdurate to the views of the medical profession. The council of the association will establish an emergency guaranty fund to further the cause of the medical profession in major disputes with the government. The fund will be divided as follows: Fund A will provide for administrative, propaganda and similar expenses. Fund B will be used for these purposes and also for compensation of individual practitioners who suffer exceptional financial hardship (because of adherence to the cause of the profession). The British Medical Association has guaranteed $400,000 to fund A. Every member of the profession is urged to guarantee at least $100. The fund will remain in the form of guaranties to be called in at the discretion of the council of the British Medical Association. Should fundamental disagreement arise with proposals of the government, the medical profession will attempt to influence public opinion in order that pressure may be brought on Parliament to modify objectionable features of the bill. If this fails it is possible that physicians will not work under the new service. Treatment of patients would not be refused but would be continued outside the new service. If payment of fees is refused by patients on the basis that the bill entitles them to free treatment, then it has been suggested that the treatment will be given free of charge and the physician compensated from the fund.

Appalling Conditions in India's Dairy Industry

A report to the government of India by Mr. R. A. Pepperall, chief executive officer of the British Milk Marketing Board, reveals appalling conditions in India's dairy industry. The efficiency of the industry is considered by the author to be the lowest in the world. Adulteration by adding water to milk was usual at all stages of distribution from producer to consumer. In Calcutta the added water exceeded 25 per cent. The conditions of milk production in Indian stables are described as "starvation of stock, squalor, filth, ignorance or indifference toward hygienic principles, and revolting personal habits, allied to official apathy." At one Bombay stable housing hundreds of animals, in which conditions might be regarded as normal, the author observed crows feeding from a dead buffalo and then drinking from milk containers. At another stable the buffaloes were allowed to immerse themselves daily in a backwater in which was deposited the urine of 500 animals and in which there were dead animals. Udders were not washed before milking. Official reports showed a bacteria count of 36 million per cubic centimeter for Bombay milk. Although milk production in India is declining, the population is increasing. The price of milk is the highest in the world. The author points out the unparalleled dimensions of the problem of reorganizing an industry consisting of 22 million illiterate and poverty stricken producers with semistarved livestock.

Restoration and Enlargement of the Royal College of Surgeons

At the Hunterian dinner of the Royal College of Surgeons the president, Sir Alfred Webb-Johnson, announced that plans were being made for restoration of the famous Hunterian Museum, which had been damaged by German bombs. Help and encouragement had been received from all parts of the world. The Bernhard Baron trustees provided an endowment for experimental research, so that in their preoccupation with more material things this work would go on without interruption. It was decided that the museum needed men to take charge of the sections of anatomy and of pathology and they were fortunate to secure the services of Professor Willis from Melbourne and Professor Wood-Jones from Manchester. Sir William Collins had provided endowments of $1,000,000 for the scientific departments. In providing the means for carrying out their plans the response of fellows of the college had been inspiring at home and abroad, and also help had been received from all quarters of the profession. The plans provided for an enlarged museum space, extension of research, rooms for separate study, common rooms for postgraduates from all parts of the world, extensions of the library, and a great conference hall. The Wellcome trustees had made a magnificent gift, and valued equally with the gift were their collaboration and the help of Sir Henry Dale, so that a group of medical museums might be established in London that would be a mecca for students of all countries. Thus they carried on the great Hunterian tradition.

Penicillin Treatment of Syphilis in the British Army

Lieut. Col. James Marshall recently discussed the use of penicillin in the treatment of syphilis at a meeting of the Section of Experimental Medicine and Therapeutics of the Royal Society of Medicine. Although at least five years is required to evaluate any method of treating early syphilis, large scale experiments have allowed certain conclusions to be drawn. Treatment consisted mainly in intramuscular injections of aqueous solutions of penicillin. Almost independently of the total dosage spirochetes disappeared from surface lesions in about twelve hours, lesions healed rapidly and serologic reactions became negative. In 270 cases of early syphilis treated with 2,400,000 units of penicillin for seven and one half days and followed for six months the failure rate was 8 per cent, in contrast to a 2 per cent failure rate in an equal number of cases treated by the twenty day arsenoxide and bismuth method. Based on an American observation of probable synergism between penicillin and arsenoxide, the author has adopted a combined method of penicillin (2,400,000 units in seven and one half days) and arsenic (ten daily injections of oxophenarsine hydrochloride). Arsenical reactions were rare. If reactions did occur, arsenic therapy was discontinued and the total dose of penicillin was then increased to 4,000,000 units (one hundred injections of 40,000 units each). Approximately one third of these cases have been followed for four to six months after completion of treatment. Three cases of mucocutaneous relapse have occurred but none have shown serologic relapse. From these results the author concludes that combined therapy is preferable to penicillin alone. This method of treatment is now routine in British army hospitals.

An Industrial Resettlement and Research Bureau

The great efforts that have been made during and since the war for the rehabilitation and resettlement of the disabled have been described in previous letters to THE JOURNAL. At a meeting of the British Council for Rehabilitation it was resolved that an industrial resettlement and research bureau should be established. It was suggested that a committee of twelve industrialists be formed with power to include additional professional and technical experts to frame the terms of reference and structure of the bureau for later approval. There are approximately 2,000,000 disabled men for whom everything possible should be done to enable them to compete as nearly on equal terms as possible with the able bodied. Mr. Aneurin Bevan, minister of health, stated that ill afforded enormous waste was involved in not getting the disabled into work which they could perform.

SWEDEN

(From Our Regular Correspondent)

STOCKHOLM, March 2, 1946.

Americans Elected Members of Swedish Academy of Science

At a recent meeting Prof. H. S. Gasser of the Rockefeller Institute, New York, and Prof. E. D. Merrill, director of the Arnold Arboretum of Massachusetts, were elected members of the Swedish Academy of Science. D. M. S. Watson of London, professor of zoology and comparative anatomy, was also honored. At the same meeting several grants for medical research were announced, including one of 2,200 kronor to Dr. Nils Emmelin of Lund for an investigation of histamine in blood plasma.

As a subsequent meeting of the academy the following grants from the Nobel Fund were made: 4,000 kronor from the physics fund to Dr. Sten von Friesen of Uppsala for a study of the structure of the lower border of the continuous x-ray spectrum; 8,400 kronor from the same fund to Prof. Lise Meitner for researches in nuclear physics and 4,000 kronor to Prof. O. Klein for a continuation of studies of the quantum treatment of the magnetic properties of crystals. From the chemistry fund Prof. The Svedberg was granted 9,000 kronor for a continuation of investigations of the mass and structure of protein molecules and their reactions; Prof. H. von Euler, 9,500 kronor for study of metabolism in isolated cell nuclei and the histones of certain nucleic acids; Prof. Gunnar Hägg, 4,000 kronor for x-ray researches in crystals; Prof. Arne Fredga, 5,000 kronor for work on optically active compounds, and Prof. Karl Myrbäck, 5,000 kronor for the purchase of a Charples supercentrifuge.

Serious Lack of Medicines in Finland

The present deficiency of drugs in Finland is said to constitute a direct threat to public health. Dozens of prescriptions are left unfilled daily because of the lack of suitable ingredients. The hospitals are having great difficulty in treating their patients, and although ether is manufactured in Finland, the iodine needed for surgery is completely gone. A great many drugs previously were imported from Sweden, but currency difficulties have curtailed this source. England is at present unable to ship drugs to Finland, and the Finns had placed their hope in America. However, the trade agreement with the United States is not clear, so that the situation promises to be difficult for many months to come.

Danish Tobacco Cause of Oral Inflammation

A widespread form of oral inflammation, difficult to treat, is troubling physicians and dentists in Denmark. It is believed that its severe character is due to the poor quality of the Danish tobacco, which irritates the mucous membrane, leaving it less resistant to infection. Many patients, not realizing that they are suffering from this inflammation, merely feel extremely tired, and Danish doctors believe that in these cases the infection has become generalized.

Swedish Doctors Assist Their Neighbors

Swedish physicians and medical associations have contributed generously to a fund which has made it possible for their Scandinavian colleagues from Finland, Norway and Denmark to study medicine in Swedish schools and hospitals. This aid is also extended to physicians from neighboring countries attending conventions in Sweden, who are allowed to take only a small amount of money with them out of their own countries (barely enough to support them for a day).

Committee for Testing the Durability of Drugs

The Committee for the Testing of the Durability of Drugs has recently been formed, consisting of representatives from the Royal Pharmaceutical Institute, the Federal Pharmaceutical Laboratory, the Military Apothecary, the pharmaceutical industry and apothecaries' organizations. The committee will collect literature on the subject, particularly on those drugs whose lasting qualities are important for economic or other reasons, and then begin experimentation. The present literature on the subject is meager, and continued investigation is needed. It is hoped that considerable waste may be avoided by knowledge of how long drugs can be safely stored without loss of potency.

Chilean Pediatrician in Stockholm

Dr. Gabriel Solar, pediatrician, the daughter of Chile's chargé d'affaires in Oslo, has been sent to Sweden by the Chilean government to study the methods used in Swedish children's hospitals and pediatrics. She will also study in Norway before returning to Chile.

Swedish Association of Industrial Physicians Established

In February, Swedish industrial physicians established an association, as a branch of the Swedish Medical Association, to further knowledge and investigation in the field of industrial health.

Cellophane Tubes for Blood Transfusions

A satisfactory cellophane tube is now produced in Sweden for blood transfusions which will avoid the difficulties encountered by the use of rubber tubing.

PARIS

(From Our Regular Correspondent)

Feb. 26, 1946.

Epidemic of Plague in Corsica

On February 14 at a meeting of the Society of Comparative Biology, Lucien Bernard, inspector of public health for the Department of the Seine, described an epidemic of plague which occurred in Adjaccio, Corsica, during the summer of 1945. Bubonic plague had been unknown there until this time. Between May 11 and June 13, 1945 there were 13 cases, with 10 deaths. The disease was introduced by infected rats that arrived on ships from the Mediterranean basin, where it was epidemic at the time. The island was quarantined and the entire population of Ajaccio, 25,000 inhabitants, was vaccinated with a vaccine of killed bacilli prepared by the Pasteur Institute. Two vaccinations of 1 and 2 cc. were given at an interval of eight days. Many thousand rats were systematically destroyed by squill and arsenic anhydride. Disinfestation was performed by special teams with 5 per cent DDT powder. It was found that one tenth of the rats were of the Rattus alexandrinus type, which propagates plague. There was an average of two fleas per rat, 70 per cent of the fleas being also of the type which transmits plague. The author reported that the epidemic probably was stopped because of the small number of fleas resulting from climatologic conditions in 1945 and the sanitary measures instituted. At the same meeting Girard called attention to the efficacy of vaccination against plague with attenuated living bacilli. Robic and Girard had used this vaccine successfully in Madagascar where 800,000 inhabitants were vaccinated annually for several years. Use of the vaccine over a period of eight years proved that it was innocuous and that its administration caused a decrease of morbidity which was parallel with the number of vaccinations.

New Technic of Infiltration of Stellate Ganglion

Seze, Ryckwaert, Guegen and Roisin have described a technic of infiltration of the stellate ganglion based on two years' experience with a thousand infiltrations and radiologic evidence. The authors point out that the problem involved is to reach the stellate ganglion by the shortest route without pain or accident. They made preliminary studies on cadavers. The patient is placed on his back with the head turned at a 45 degree angle to the side opposite the infiltration site. Three lines are drawn,

the first from the edge of the tragus to the medial end of the clavicle, the second parallel and one fingerbreadth (1 to 1.5 cm.) posterior to the first line, the third parallel and two fingerbreadths superior to the clavicle. The site of injection is at a point where the second line intersects the third line. Subcutaneous planes are anesthetized, a thin needle (of 0.5 mm. bore and 5 to 6 cm. long) being used. The jugular and carotid structures are pressed back toward the sternum by the left index and middle fingers placed above and below the point of injection. With the right hand the needle is then inserted straight back vertically or at a slight angle of 15 degrees for 3 or 4 cm. until the internal extremity of the neck of the first rib is reached. Procaine hydrochloride 1:200, 20 to 25 cc., is injected. The patient is then placed in a half sitting position so that the solution can pass along the stellate ganglion. The authors report that the method is painless and because of its ease avoids certain drawbacks of other methods. Its harmlessness has been established. Painful lesions of the brachial plexus are unusual, and no pleuropulmonary wounds have occurred. Danger to large blood vessels is avoided by the position of the head and pressure of underlying structures away from the point of injection. In about one of twenty to thirty infiltrations the vertebral artery is encountered. The needle is then withdrawn and pressure with a tampon is applied for a few minutes. The operation may then be repeated again at a more oblique angle.

BRAZIL

(From Our Regular Correspondent)

RIO DE JANEIRO, March 8, 1946.

The Anemia from Antiplatelet Serum and from Estradiol

Drs. Walter Cruz, E. M. da Silva and R. Pimenta de Mello, from the Division of Hematology of the Oswaldo Cruz Institute of Rio de Janeiro, studied the relation between thrombocytopenia, anemia and the hemorrhagic intestinal lesions caused by estradiol benzoate and antiplatelet serum.

Estradiol benzoate in large doses (0.1 mg. per kilogram) produces thrombocytopenia in dogs after four to six days. As a result of the decrease of platelets in the circulating blood (one third to one tenth of the normal) a picture of purpura appears, with predominance of intestinal hemorrhages followed by severe anemia. When active antiplatelet serum is administered to dogs, thrombocytopenia is rapidly obtained within twelve to forty-eight hours. Intestinal lesions of purpura are conspicuous, and hemorrhages with acute anemia are usually present. These results seem to indicate the identity of the mechanism of anemia produced by estradiol benzoate and by antiplatelet serum. The practical value of the determination of occult blood in feces of patients with thrombocytopenic purpura is emphasized by the authors as an aid to the diagnosis of crises of Werlhof's disease.

The Montenegro Reaction in Leprosy

The concomitant occurrence of leprosy and cutaneous leishmaniasis has been reported by several investigators and is important in the early diagnosis of both diseases. Dr. S. C. Arantes of São Paulo recently published a report of investigations of the Montenegro intradermal reaction in patients with leprosy, which, in summary, showed that (1) the Montenegro reaction was negative in all cases of leprosy without previous history of leishmaniasis, (2) the reaction was always strongly positive in leprosy patients with a probable history of leishmaniasis twenty or more years earlier, (3) the reaction was not modified by leprosy in cured cases of leishmaniasis and (4) a negative reaction was obtained in 1 patient in whom leishmaniae were demonstrated in the ulcer. These results have been confirmed by Dr. Josefino Aleixo and Dr. Joel T. Coelho, Division of Leprosy, Minas Gerais State Department of Health, in a study of the Montenegro reaction in 23 selected cases of leprosy. However, in the latter series a positive Montenegro reaction was found in 1 patient with an ulcer presenting characteristics of both leprosy and leishmaniasis with many Hansen bacilli but no leishmaniae. The diagnostic value of the Montenegro reaction is emphasized for all cases in which there is a possibility of both leishmaniasis and leprosy.

Retirement of Prof. Henrique Roxo

Dr. Henrique Belfort Roxo, professor of clinical psychiatry and director of the Psychiatric Institute of the University of Rio de Janeiro, has reached the retirement age after thirty-five years of active duty at the university. Among many papers published by Dr. Roxo particular mention should be given to the report presented to the seventeenth International Congress of Medicine in London in 1913 on "Chronic Hallucinatory Systematized Delirium," which was considered at the time a new disease entity. In 1921 he published the first edition of his "Textbook of Psychiatry," which is a classic work for medical students in Brazil.

Brief Items

The State Psychiatric Hospital at Salvador, state of Bahia, has been recently improved and remodeled, and an outpatient department has been opened.

The São Francisco de Assis x-ray institute of the city of São Paulo is now offering a postgraduate course in clinical radiology, to be given in February. Drs. Rafael de Barros, Olavo Pazzanese, Carl Fried and Nelson de Carvalho will be in charge of the lectures and practical demonstrations included in the course.

Drs. Alfredo Monteiro, A. F. Costa Junior, Aurelio Monteiro and Campos da Paz Filho have been elected to the governing board of the Rio de Janeiro Medical and Surgical Association.

Drs. Hugo Firmeza, Rubens Siqueira, Abelardo Tavares and Roberto C. da Rocha have been elected to the governing board of the Brazilian Association of Industrial Medicine.

A new leprosarium bearing the name of Padre Damião has been recently opened at Ubá, state of Minas Gerais. It is a modern and well equipped institution for the care of about 1,500 patients.

A new foundation has been organized with a gift made by Mrs. Anita P. D'Angelo to build and operate a general hospital in the city of São Paulo. The institution will bear the name of Sabbado D'Angelo, a late Italian industrialist of the city.

The Department of Hospitals of the city of Rio de Janeiro has completed the plans for the building of a 400 bed general hospital at Meyer, an important northern suburb of the city.

The Special Service of Public Health, operated by the Brazilian and the American governments through the Office of Inter-American Affairs, has opened two health centers in the towns of Valladares and Aymorés, state of Minas Gerais, which will function as public health agencies for the two towns. The service has cooperated in the construction of water supply and sewerage systems for both towns.

Marriages

JOHN RICHARD O'BRIEN, Niagara Falls, N. Y., to Mrs. Dorothy Newton Worcester in Lebanon, Mo., February 2.

FRANKLIN CASWELL MILES, Nashville, Tenn., to Miss Eugenia Frances Newsom of Sandersville, Ga., February 11.

JAMES EDWARD WHEELER, Columbia, S. C., to Miss Carol Jane Allen of New York in Glencoe, Md., March 4.

CLAUDE HENRY WORKMAN JR., McCormick, S. C., to Miss Ruth Bennett of New Orleans, February 17.

FRANCIS PRESTON OWINGS, Union, S. C., to Miss Carrie Shell Cathcart in Winnsboro, February 23.

FRANK PRINCI, Boston, to Miss Eva Demchak in Osceola Mills, Pa., January 2.

BENEDICT TRACH to Miss Dorothy Bennett, both of Minneapolis, February 12.

Correspondence

BRUCELLA MELITENSIS ISOLATED FROM SWINE TISSUES IN IOWA

To the Editor.—Since publication of the article entitled "Occurrence of Brucella Melitensis in Iowa" in the January 12 issue of THE JOURNAL, page 72, investigation of a case of brucellosis caused by Brucella melitensis and of the suspected source of infection has led to the isolation of Brucella melitensis from tissues of hogs in Iowa.

W. N., a man aged 32, a farmer living in Humboldt County, Iowa, had onset of illness due to brucellosis in September 1945. On September 17 Brucella melitensis was isolated from the blood clot of the specimen, which the attending physician forwarded to the State Hygienic Laboratory for the agglutination test.

The patient gave the history of direct contact with cows and hogs but not with sheep or goats. Through the Bureau of Animal Industry and State Department of Agriculture a veterinarian was authorized to secure blood specimens from cows and hogs. Cows numbering 18 showed negative agglutination tests; 4 sows were tested, 2 of which proved to be reactors.

Infected sows were sold from this farm before arrangement was made for slaughter and laboratory study. Attention was then directed to 115 "spring pigs," some of which were littered by infected sows. Of particular interest were 20 gilts, which at the time of inquiry (Dec. 20, 1945) weighed between 250 and 300 pounds. The owner (W. N.) had planned to use these animals for breeding purposes but consented to have them blood tested. When 8 of the gilts showed positive agglutination reactions, no persuasion was needed to induce the farmer to dispose of some of his hogs.

Through the courtesy of the managers of the Tobin Packing Company, Fort Dodge, special arrangement was made for slaughter of the 20 gilts from the farm of W. N. The animals were killed on Feb. 13, 1946, at which time the spleen, uterus, a kidney, a portion of the liver and various lymph glands were removed from "reactor" and "nonreactor" hogs. The tissues were transported at once to the Veterinary Research Laboratory at Ames for cultural study. During succeeding days one of us (S. H. M.) isolated twelve strains of Brucella from the swine tissues, four from reacting and eight from nonreacting gilts. Three strains were recovered from maxillary lymph glands, three from hepatic lymph nodes, five from unidentified lymph glands and one from the spleen. Bacteriologic examination of the uteri, livers and kidneys remained negative.

All of the twelve strains as submitted to the State Hygienic Laboratory proved to be Brucella melitensis, based on the following characteristics: (1) nonmotile, gram negative, pleomorphic coccobacilli; (2) agglutination of organisms by anti-melitensis serum; (3) better growth with ordinary atmospheric conditions than under 10 per cent carbon dioxide; (4) a trace of hydrogen sulfide in twenty-four hours but none in forty-eight, seventy-two and ninety-six hours, and, lastly, (5) growth in twenty-four, forty-eight and seventy-two hours on tryptose agar plates containing basic fuchsin 1 : 25,000 and on the same medium containing thionin 1 : 25,000.

This is the first time in Iowa and as far as known in the United States that Brucella melitensis has been isolated from tissues of naturally infected swine.

Valued assistance in the steps which led the way to these findings was rendered by Dr. Charles L. Jones, Gilmore City; Mrs. Lynn Freifeld, senior bacteriologist, State Hygienic Laboratory, Iowa City; Mr. Fred Clark, manager and Mr. Joe Kelly, assistant manager, Tobin Packing Company, Fort Dodge; J. A. Barger, D.V.M., inspector in charge, Bureau of Animal Industry, Des Moines; C. C. Franks, D.V.M., state veterinarian, Des Moines; E. H. Pick, D.V.M., Pocahontas; Dr. M. T. Johnson, M.P.H., medical director, District Health Service No. 5, Fort Dodge.

IRVING H. BORTS, M.D., Iowa City.
Director, State Hygienic Laboratory.

SAM H. MCNUTT, D.V.M., Ames, Iowa.
Professor of Veterinary Research, Iowa State College.

CARL F. JORDAN, M.D., Des Moines, Iowa.
Director, Division of Preventable Diseases and Epidemiologist, Iowa State Department of Health.

PENICILLIN IN AGRANULOCYTOSIS

To the Editor:—Our recent experience with penicillin in the treatment of thiouracil induced agranulocytosis has created in our minds a point of view at variance with the report of the Council on Pharmacy and Chemistry of February 9. We are referring to the recommendation that a daily dosage of 500,000 units is the desirable method of treatment in these cases.

In 2 recent cases prompt improvement occurred only when the dose of penicillin was increased to 1,000,000 units or more daily. It is our conviction that these larger doses of penicillin represent adequate therapy and that the dosage of one-half million units daily is a suboptimal amount of penicillin.

We urge the acceptance of this recommendation by the Council on Pharmacy and Chemistry and trust that this communication will come to the attention of men employing thiouracil in the treatment of hyperthyroidism.

MARTIN G. VORHAUS, M.D.
HAROLD H. ROTHENDLER, M.D.
New York.

To the Editor:—In a recent article in THE JOURNAL by Boland, Headley and Hench on the "Treatment of Agranulocytosis with Penicillin" the authors cite 10 cases, including 1 of their own, which have been successfully treated to date. In their review of the literature the authors apparently failed to note a case reported by us (Russek, H. I.; Smith, R. H., and Zohman, B. L.: Subacute Bacterial Endocarditis Complicated by Agranulocytosis: Report of Case with Recovery, *Ann. Int. Med.* **22**:867 [June] 1945). In this instance a white man aged 21 with subacute bacterial endocarditis was treated with sulfonamides, from which he developed agranulocytosis. Blood culture remained persistently positive for Streptococcus viridans. Recovery from both diseases, the first to be recorded, resulted from the administration of 8,400,000 units of penicillin over a period of twenty-one days

HENRY I. RUSSEK, M.D.,
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Staten Island, N. Y.

TREATMENT OF EPILEPSY

To the Editor:—In the March 2 issue of THE JOURNAL on page 565 De Jong in an article on the treatment of epilepsy makes the statement that "a ketogenic diet has been advocated but its efficacy is doubtful."

This is a misstatement of fact which should be promptly corrected. There is no doubt of the efficacy of the ketogenic diet in the minds of those who have used the diet or are familiar with the literature. The author quotes two references to support his statement. If he has access to his first reference, by Wilder, he will find that this article merely presents a suggestion as to the possible value of a ketogenic diet. In the second reference there are statistics to prove that the ketogenic diet was effective in 47 per cent of the children treated. There are many references in the literature since 1938. The most concrete evidence of the value of the ketogenic diet is presented in the articles which indicate a definite improvement in the electroencephalo-

grams of patients under treatment with the diet. There are a large number of cases reported which have been treated for long periods. The ketogenic diet has been the only effective treatment of petit mal in children. Until now drugs have been totally ineffective. As most children with petit mal either have, or eventually develop, grand mal epilepsy, the greatest value of the ketogenic diet lies in the fact that it will control all the manifestations of this disease, including grand mal. It will never aggravate any one manifestation of the disease. The most effective argument for the ketogenic diet is the following quotation from "The Practice of Pediatrics" (Hagerstown, Md., W. F. Prior Company, 1945) volume 4, chapter 12, page 31, under the heading "Dietary Regimen":

> For the majority of children with genuine epilepsy this would seem at the present time to be the most important form of therapy because it apparently tends to alter the physicochemical state or the metabolic activity of the body in a direction favorable to correction of the underlying disturbance in brain cell physiology.

M. G. PETERMAN, M.D., Milwaukee.

Bureau of Investigation

CEASE AND DESIST ORDERS

Abstracts of Certain Federal Trade Commission Releases

The work of the Federal Trade Commission in helping to protect the public against misrepresentation or fraud in the medical as well as other fields, has been greatly extended by the provisions of the Wheeler-Lea Amendment to the Federal Trade Commission Act. The Food, Drug and Cosmetic Act of 1938 increased the Food and Drug Administration's control of the advertising claims and statements made on the label of a medicine or on the carton or in the accompanying leaflet, whereas what might be termed collateral advertising, that which appears in circulars, newspapers and magazines and over the air, comes more actively under the purview of the Federal Trade Commission by virtue of the Wheeler-Lea Amendment.

THE JOURNAL has at various times commented on the activities of the Federal Trade Commission in this connection, even before the Wheeler-Lea Amendment gave it its added powers. In some cases the Commission may accept from the person or concern involved a stipulation that the objectionable practices or claims cited will be discontinued. In other cases the Commission issues what is known as a Cease and Desist Order, in which the individual, manufacturer or distributor cited is ordered to cease and desist from practices which have been declared objectionable. In some cases the claims cited have been discontinued by the firms several months (or even longer) before the issuance of the order. Abstracts of some of the orders issued in 1943, 1944 and 1945 follow in this form: name of product, name of distributor, date of issuance of complaint, date of issuance of Cease and Desist Order and terms of order.

Brooks Rupture Appliance and Automatic Air Cushion.—Brooks Appliance Company, Harold C. Brooks and Craig W. Brooks, Marshall, Mich., New York and Chicago; complaint issued Nov. 2, 1943; order issued Jan. 29, 1944. Order directed respondents to discontinue any advertising representing that the devices mentioned constitute a competent remedy or cure for hernia. Order also directed Fogarty-Jordan-Phelps Company, Chicago, an advertising agency, to discontinue the false and misleading representations that the truss in question will do away with all discomfort and worry caused by hernia, enable the wearer to undertake and enjoy hard work and strenuous play, that in every case it will hold reducible hernia securely and comfortably in place at all times, can be depended on to assist nature in healing hernia to the extent that the need of a truss or other support will be eliminated; that it will make strangulation of hernia impossible, and that the device adjusts itself to every movement of the body, and its air cushion attachment is fully automatic and clings to any spot to which it is adjusted. The order further directed the respondents to cease representing that another Brooks device, the "Natural Uterine Supporter," is an effective treatment for uterine displacements and will relieve or cure ailments and diseases caused by displacements of the womb.

Dupree Nostrums.—Imperial Drug Exchange, Inc., trading as Dupree Medical Company, and its president, Abraham Parodney, New York; complaint issued Dec. 11, 1943; order issued May 17, 1944. Order directed respondents to discontinue any advertisement which represented that their preparations, "Dupree Brand New Formula Pills" and "Dupree Pills, Double Strength, New and Improved Formula," are a competent and effective treatment for delayed menstruation arising from colds, nervous strain, poor nutrition, anemia, over-exposure, change of climate, or from any other cause; or which did not reveal that these products should not be used in the presence of abdominal pains, nausea or other symptoms of appendicitis. It was provided, however, that it would be sufficient for such advertisement to confine its warning to the statement, "Caution: Use only as directed," if the same warning should appear on the label.

Gold Medal Haarlem Oil.—Leonard Block, Melvin Block and Betty Roberts, trading as Gold Medal Haarlem Oil Company, Jersey City, N. J.; complaint issued Nov. 7, 1942; order issued April 17, 1944. Order directed respondents to discontinue the following misrepresentations in the advertising of the product variously designated as "Gold Medal Haarlem Oil" and "Gold Medal Haarlem Oil Capsules": That its use will restore the kidneys or bladder to healthy activity; that it is a safe, effective and competent treatment for conditions described as weak kidneys, irritations of the bladder, aches, sciatica, neuritis, neuralgia, lumbago, nervousness, dizzy spells or swollen ankles; that such conditions are symptomatic of ailments which are treated successfully by the use of this preparation; that it is a remedy or cure for ailments or diseases of the kidneys, or that it has any therapeutic value in treating those conditions. The order further directed the respondents to discontinue any advertisement that did not reveal that the indiscriminate use of this product by persons whose kidneys are diseased or injured might interfere with their proper functioning, and that prolonged administration might injure normal kidneys. The order provided, however, that it would be sufficient for such advertisement to state "Caution: Use only as directed" if the instructions for use on the label contain a warning to the same effect.

Helena Volay Face Oil.—Helen E. Hoeck, trading as Helena Volay Cosmetics, Needles, Calif.; complaint issued May 28, 1943; order issued Jan. 25, 1944. Order directed respondent to cease representing that Helena Volay Face Oil will significantly improve the skin or cause it to become firmer or appear more youthful, or that it will effectively treat or prevent the formation of wrinkles and sagging tissues. The order also was directed against the Chicago Union Advertising Agency, Inc., of Chicago, which prepared and handled the advertising.

Kaytonik.—Joseph P. Kayatta and Kay Laboratories, Inc., Providence, R. I.; complaint issued Sept. 28, 1943; order issued Jan. 24, 1944. Order directed respondents to cease representing that Kaytonik is a preventive of, or effective treatment for colds, will prevent a cold from developing into la grippe, influenza or pneumonia, or will build up health, strength or bodily resistance to disease or destroy germs. Order further directed respondents to discontinue using the word Kaytonik as a trade name or otherwise representing that the product is a general tonic, and cease using the word "laboratories" or any other term implying that respondents own, operate or control a laboratory equipped for compounding medicinal preparations, and for research in connection therewith.

Pheno-Isolin Products and Dialin.—Howard J. Force, former president and manager of the Scientific Manufacturing Company, Inc., and later a partner in the Force Company, both of Scranton, Pa.; complaint issued April 11, 1941; order issued May 13, 1944. Order directed Force and his agents to cease representing that Pheno-Isolin or Pheno-Isolin Ointment is a powerful germicide of value in surgery or in treatment of peritonitis, gangrene or similar ailment; that they have any value in the treatment of stiffening of the joints, colds, sinus infections, eczema or burns; or that Dialin is efficacious for diabetes or has any value in the treatment of that condition. In an earlier action of the Federal Trade Commission against Force's concern, that outfit stipulated that it would discontinue on its labels or in advertising matter misrepresentations to the effect that Pheno-Isolin possesses antitoxic properties or acts as a "sure" germicide in the treatment of certain maladies, or that, when taken as directed, the product destroys infection, dissolves all other kinds of bacteria, or accomplishes some other things. In THE JOURNAL April 25, 1942, page 1512, appeared a lengthy discussion of actions brought by various government agencies against the Scientific Manufacturing Company and Howard J. Force, including a Post Office fraud order debarring the concern and the man from use of the mails for fraudulently selling its Dialin for diabetes, and a few months afterward a supplementary order covering the name H. J. Force, who had been found to be continuing the business under his own name. In the fraud case a government chemist testified that Dialin was a mixture of magnesium carbonate, sodium bicarbonate, glycerin, plant material (including rhubarb, ipecac and peppermint) a small amount of alcohol, and traces of iron, phosphate, citrate and calcium. Pheno-Isolin, according to a government chemist who testified in a case brought against the concern for violating the earlier Food and Drugs Act, was nothing more wonderful than turpentine, camphor, menthol and resin dissolved in an oil. Yet it was promoted for such conditions as cancer, boils, carbuncles, neuritis, coughs, and some other things!

Von's Pink Tablets.—George and Sadie Von Nieda and Florence Beebe, trading as Von Drug Company, Miami, Fla.; complaint issued Feb. 12, 1942; order issued Jan. 31, 1944. Order directed respondents and their agents and distributors (trading as Philadelphia Von Company, Chicago Von Company and the like) to discontinue any advertisements which represented that the tablets are an effective treatment for stomach ulcers, that they will afford prompt relief to a person suffering from a long-standing case of this condition, restore the stomach content to a better chemical balance, prevent or tend to prevent stomach ulcers from forming, or effectively coat stomach ulcers or denuded surfaces in the stomach with a protective coating.

Bureau of Legal Medicine and Legislation

MEDICOLEGAL ABSTRACTS

Malpractice: Limitation of Action; False Certification of Insanity.—The plaintiff was committed to the state hospital as a result of the defendant's certification that she was insane. Contending that such certification was false and fraudulent, she filed suit for damages against the defendant physician. From an order dismissing her petition, plaintiff appealed to the Supreme Court of Missouri.

The plaintiff alleged that on Sept. 17, 1936 the defendant, a duly licensed physician, executed a certificate to the effect that he had on that day seen and examined the plaintiff and that he believed her to be insane; that defendant subsequently appeared in the county court and verified this certificate; that the plaintiff was accordingly declared insane and committed to the state hospital until December 17, when she was paroled to her husband; and that in August 1944, after a hearing in the probate court, she was officially pronounced sane. The plaintiff then alleged that during the entire time from September 1936 to August 1944 she was, in fact, sane; that defendant's certificate was false in that he did not on September 17, or at any time prior thereto, treat or examine the plaintiff for any mental disorder; and that, as a direct result of the defendant's acts, plaintiff was deprived of her liberty and rights as a citizen and has suffered, and will suffer, great pain of body and anguish of mind.

The Missouri statute of limitations provides that causes of action for malpractice (which plaintiff's counsel contend the petition sets forth) must be commenced within two years after the malpractice complained of (Mo. R. S. A., section 1016) unless the petitioner was then under a disability, in which case suit must be commenced within two years after the disability is removed (Mo. R. S. A., section 1020). Defendant contended the action was barred because it was not commenced within two years of the alleged malpractice. The plaintiff, however, argued that she, although sane, was under a disability within the meaning of section 1020 by reason of her commitment and confinement brought about by defendant's certificate, and that the two year period did not commence to run until the removal of that disability, namely the adjudication of plaintiff's sanity on Aug. 28, 1944.

It must be plainly seen, said the Supreme Court, that the plaintiff, in order to state a cause of action against the defendant, has pleaded, and would have to prove, her sanity at the time she was committed as the result of defendant's certificate. Since her action was instituted more than two years after the date of defendant's certificate, she has the burden of showing that she was under a disability within the meaning of the statute. To do so, she alleges she was insane at the time the defendant executed his certificate. The plaintiff's allegation of her sanity at the time her cause of action accrued, continued the court, surely negatives her allegation of insanity which she would have to prove in order to justify the delay in filing her action. The plaintiff urges, however, that if a physician assumes to sign a statutory certificate of another's insanity and does so untruly, without making, or without the exercise of due care in making, an examination or inquiry, then, if damage ensues, such physician should be held liable for the injury. In effect, therefore, the plaintiff argues that "insane" means not only persons actually insane but also persons actually sane but wrongfully committed as insane. At first glance, in such a case, it would seem that a court should be liberal in construing an "excepting section" in order to permit such a plaintiff's recovery, if a consequent commitment and confinement as an insane person had the practical effect of keeping the sane person from a timely commencement of his action. The court said, however, that statutes of limitations are not to be evaded except by the methods provided therein. The exceptions contained therein are strictly construed and are not enlarged by the courts on considerations of apparent hardship. The legislature of Missouri, concluded the court, did not broaden the language of the excepting section to include a sane person who, notwithstanding, is in fact disabled because wrongfully committed and confined as insane, from bringing an action; and so to broaden the section by construction would deny the effect of the plain meaning of the word "insane." The court accordingly concluded that the plaintiff's cause of action was barred by the statute of limitation, and the order of dismissal in favor of the defendant physician was affirmed.—*Woodruff v. Shores, 190 S. W. (2d) 994 (Mo., 1945).*

Malpractice: Insufficiency of Evidence to Show Malpractice in Gallbladder Operation.—The plaintiff sued for damages alleged to have resulted from the malpractice of the defendant physician. At the close of all the evidence the trial court directed a verdict in favor of the physician. Later, on motion of the plaintiff, the court entered an order granting a new trial and from such order the physician appealed to the Supreme Court of Washington.

The plaintiff's evidence showed that he had consulted the defendant physician in 1943 complaining of heartburn. After examination an operation to remove the appendix and gallbladder was advised and later performed on March 9, 1943. He went home from the hospital March 30 and from then until July the wound discharged bile and the plaintiff suffered from fevers and chills and at times coughed and vomited blood and bile. In May a piece of gauze was pulled from the wound by the plaintiff's mother. During July the defendant opened the wound on several occasions. In August defendant performed a second operation, requiring seventeen days' hospitalization, and after staying home for a while plaintiff returned to the hospital a third time. In December the plaintiff underwent an operation at the Mayo Clinic by Dr. Counseller. Returning to his home in January, he was treated by Dr. Willis and Dr. Bannick. During the next six months or so he made three more trips to Mayo's, and underwent another operation and a duodenal drainage. Between trips to the hospitals and to the different physicians, the plaintiff's wound would heal and he would suffer from fever, chills and jaundice; when the wound was opened or would break open, however, the resulting drainage would give the plaintiff some relief. The drainage ceased after the plaintiff's first trip to Mayo's but he continued to suffer from fever, chills and jaundice for a considerable time.

The defendant physician testified that the plaintiff first consulted him relative to a stomach trouble that had been present since plaintiff was a child. After making a complete physical, laboratory and x-ray examination, the physician concluded that the plaintiff's gallbladder and appendix were diseased and recommended their removal. The remainder of his testimony consisted, for the most part, of a most minute description of the actual performance of the operation of March 9. Asked if, in cutting the cystic duct, he had come close to the common hepatic duct, the defendant answered "On the contrary, I knew I had not come close to it." The doctor said the flow of bile might be due to disease or to a stricture in the remaining duct, or it might come from an accessory duct. Speaking of accessory ducts, he said that "they are not always there, but they are sufficiently frequent so that they are always in the mind of the operator and is an added reason to the ones that I have given before for putting drainage into the abdominal cavity after the removal of the gallbladder." At the hospital the plaintiff was given medicine to relieve his pain and to assist his recovery and was subjected to numerous tests to ascertain his condition. At one time the defendant had run a steel probe into the wound and bile had come out. The fact that bile was coming out through the wound indicated, in defendant's opinion, that the bile was being blocked. After his return home the defendant visited him on twenty-five occasions and on many of these visits he dressed the wound. Concerning the gauze that was pulled from the wound, the defendant testified that, in accordance with his usual procedure, a piece of gauze, mixed with iodine, or a sulfonamide compound, had been laid in the wound to assist drainage and had been changed every second or third day. It was one of those pieces that had been found by the plaintiff's family. He added, however, that gauze placed in a wound such as the plaintiff had would become infected and would smell bad, but that such condition was neither unusual nor unexpected. In August the defendant performed an exploratory laparotomy which revealed dense adhesions between the hepatic flexure and the

abdominal wall. These were broken down as far as possible and "large masses" of them removed. They were caused, the defendant stated, by infected bile. He also found evidence of cirrhosis of the liver, likewise attributed to the infection.

Dr. Counseller, head of the section of general surgery at the Mayo Hospital, testified that he examined the plaintiff on December 3 and diagnosed a biliary fistula, which he said meant the drainage of the bile from an abdominal sinus or other opening or hole. During the operation which Dr. Counseller subsequently performed he found an attachment of the colon to the abdominal wall, with an opening in the colon. Asked how the hole was caused, Dr. Counseller said "That would be pretty hard for me to say. You could get a hole in the intestine from being next to an abscess and sloughing taking place, or you could get a hole in the bowel from a drainage tube that you might have in there—that is not uncommon, due to the pressure and that sort of thing." On cross examination he stated that a large amount of infection, inflammatory changes and adhesions made identification of the common hepatic duct very difficult and that he could not say that plaintiff's was not in existence. Given the history of the plaintiff's condition before and at the time of the first operation, Dr. Counseller said that while he did not pretend to be an authority on what constitutes ordinary care and customary competence in the region of Seattle, Washington, where the defendant physician practiced, in his opinion immediate surgery was not indicated at that time. He admitted on cross examination however that there could be an honest difference of opinion between competent medical men as to whether or not it would be advisable to operate on March 9 and that a physician could not be considered negligent for deciding either way.

Dr. Jacobson, who examined the plaintiff on March 17, about eight days after the first operation, testified that in his opinion the quick elevation of the temperature after the operation indicated that the bile had been infected before the operation. Asked if it was proper to allow the patient to go home a short time after the operation, Dr. Jacobson replied "Oh, yes. We let the patients go home; might as well drain at home as in the hospital. . . ."

Dr. Mosiman, who had practiced in Seattle since the first world war, was read a long hypothetical question which included a full description of the plaintiff's physical condition prior to the operation, as indicated by the plaintiff's history and the examination made by the defendant. He was then asked whether or not skilled physicians using ordinary care in this vicinity would be justified in operating for gallbladder and appendix trouble. He answered "Yes, decidedly." He also testified that a patient could have infected bile even before an operation.

Dr. Dudley, in answer to the same hypothetical question, stated "I would say these are symptoms of infection of the gallbladder which would justify an operation." He was also of the opinion that the plaintiff's condition after the operation was caused by an infection and that it was proper to allow the plaintiff to leave the hospital after his first operation.

Dr. Krantz stated that placing gauze in an infected wound and keeping the wound open and draining, to let the material out, are sound surgical measures. He was then asked if, under the condition where the surgical wound remained open, it is customary, in a surgical operation, for the surgeon to make a tract into the surgical wound through which the bile might come from some place on the inside and he answered "It would only be good surgical judgment to open the wound to allow this matter of bile to come forth."

Here we have, said the Supreme Court, a most interesting case, involving a charge of malpractice in the performance of a most difficult operation by a surgeon of many years' experience. The defendant concedes in his brief that if he cut, strictured, bruised or otherwise injured the common bile duct in either operation he would be guilty of negligence. We are unable to find any evidence which indicates that defendant in any way injured the common bile duct. Continuing, the court pointed out that the defendant in his testimony clearly and with minute detail described every step of the operation. He distinctly stated that he had not injured the common duct. His method of operation and treatment was approved by eminent physicians and surgeons, including those called by the plaintiff. It is entirely clear, said the court, that the intense pain suffered by the plaintiff was caused by the disease which necessitated the operation. Before the operation plaintiff was a sick man. He had been suffering from a disease condition of the gallbladder, brought about by infected bile. The bile remained infected after the operation. It irritated the wound and the ducts and caused the many adhesions, which in turn brought about the unsatisfactory condition which caused the plaintiff to believe that the operation had not been properly performed. There was no foreign substance left in the plaintiff's abdomen by the defendant. There was no foreign substance left in or near the wound except the gauze and other necessary dressings. Plaintiff's own witness, Dr. Bannick, was of the opinion that placing gauze in the wound and keeping the wound open and draining were sound surgical measures. In conclusion, the Supreme Court said that the great mass of evidence supplied in this case did not prove negligence on the part of the defendant. It did, on the other hand, prove that the defendant used great care in performing the operation and administering to his patient's needs after the operation. Accordingly the order of the trial court granting a new trial was reversed with instructions to dismiss the action.—*Fritz v. Horsfall, 163 P. (2d) 148 (Wash., 1945).*

Medical Examinations and Licensure

COMING EXAMINATIONS AND MEETINGS

NATIONAL BOARD OF MEDICAL EXAMINERS EXAMINING BOARDS IN SPECIALTIES

Examinations of the National Board of Medical Examiners and the Examining Board in Specialties were published in THE JOURNAL, March 30, page 896.

BOARDS OF MEDICAL EXAMINERS

ARKANSAS: * *Medical.* Little Rock, June 6-7. Sec., Medical Board of the Arkansas Medical Society, Dr. L. J. Kosminsky, Texarkana. *Eclectic.* Little Rock, June 6. Sec., Dr. C. H. Young, 1415 Main St., Little Rock.
DELAWARE: *Examination.* Dover, April 9. *Reciprocity.* Dover, April 16. Sec., Medical Council of Delaware, Dr. J. S. McDaniel, 229 S. State St., Dover.
FLORIDA: * Jacksonville, June 24-25. Sec., Dr. Harold D. Van Schaik, 2736 S.W. Seventh Ave., Miami 36.
HAWAII: Honolulu, July 8-11. Sec., Dr. S. E. Doolittle, 881 S. Hotel St., Honolulu 53.
IDAHO: Boise, July 9. Dir., Bureau of Occupational Licenses, Miss Agnes Barnhart, 355 State Capitol Bldg., Boise.
INDIANA: Indianapolis, April 25-27. Sec., Board of Medical Registration & Examination, Dr. W. C. Moore, 301 State House, Indianapolis 4.
MARYLAND: *Homeopathic.* Baltimore, June 18-19. Sec., Dr. J. A. Evans, 612 W. 40th St., Baltimore.
MINNESOTA:* April 16. Sec., Dr. J. F. Du Bois, 230 Lowry Medical Arts Bldg., St. Paul 2.
MISSISSIPPI: June. Asst. Sec., State Board of Health, Dr. R. N. Whitfield, Jackson 113.
NEVADA: Carson City, May 6. Sec., Dr. G. H. Ross, 215 N. Carson St., Carson City.
NEW JERSEY: Trenton, June 18-19. Sec., Dr. E. S. Hallinger, 28 W. State St., Trenton.
NEW MEXICO: * Santa Fe, April 8-9. Sec., Dr. LeGrand Ward, 141 Palace Ave., Santa Fe.
NEW YORK: Albany, Buffalo, New York and Syracuse, June 24-27. Sec., Dr. Jacob L. Lochner, Education Bldg., Albany.
NORTH DAKOTA: Grand Forks, July 2-5. Sec., Dr. G. M. Williamson, 4½ S. Third St., Grand Forks.
OREGON:* *Endorsement.* Portland, April 27. *Examination.* Portland, July 24-26. Exec. Sec., Miss Lorienne M. Coulee, 608 Failing Bldg., Portland 4.
PENNSYLVANIA: Philadelphia and Pittsburgh, April. Act. Sec., Bureau of Professional Licensing, Department of Public Instruction, Mrs. M. G. Steiner, 351 Education Building, Harrisburg.
SOUTH CAROLINA: Columbia, June 24-26. Sec., Dr. N. B. Heyward, 1329 Blanding St., Columbia.
SOUTH DAKOTA: * Pierre, July 16-17. Sec., Medical Licensure, State Board of Health, Dr. Gilbert Cottam, Capitol Bldg., Pierre.
WASHINGTON: * Seattle, July 11-12. Sec., Department of Licenses, Miss Nell Adams, Olympia.
WISCONSIN:* June 25-27. Sec., Dr. C. A. Dawson, River Falls.
WYOMING: Cheyenne, June 3-4. Sec., Dr. G. M. Anderson, Cheyenne.

* Basic Science Certificate required.

BOARDS OF EXAMINERS IN THE BASIC SCIENCES

ARKANSAS: Little Rock, May 1. Sec., Mr. L. E. Gebauer, 701 Main St., Little Rock.
DISTRICT OF COLUMBIA: Washington, April 22-23. Sec., Commission on Licensure, Dr. G. C. Ruhland, 6150 E. Municipal Bldg., Washington 1.
FLORIDA: Gainesville, June 4. Final date for filing application is May 20. Sec. Dr. J. F. Conn, John B. Stetson University, DeLand.
IOWA: Des Moines, April 9. Dir., Division of Licensure & Registration, Mr. H. W. Grefe, Capitol Bldg., Des Moines 19.
MICHIGAN: Ann Arbor and Detroit, May 10-11. Sec., Miss Eloise LeBeau, 101 N. Walnut St., Lansing.
NEBRASKA: Omaha, May 7-8. Dir., Bureau of Examining Boards, Mr. Oscar F. Humble, 1009 State Capitol Bldg., Lincoln 9.

Current Medical Literature

AMERICAN

The Association library lends periodicals to members of the Association and to individual subscribers in continental United States and Canada for a period of three days. Three journals may be borrowed at a time. Periodicals are available from 1936 to date. Requests for issues of earlier date cannot be filled. Requests should be accompanied with stamps to cover postage (6 cents if one and 18 cents if three periodicals are requested). Periodicals published by the American Medical Association are not available for lending but can be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Journal of Ophthalmology, Cincinnati

29:1-150 (Jan.) 1946

Persistence and Hyperplasia of Primary Vitreous: Tunica Vasculosa Lentis or Retrolental Fibroplasia. A. B. Reese and F. Payne.—p. 1.
Graduate Training in Ophthalmology: Second Jackson Memorial Lecture. H. S. Gradle.—p. 24.
*Report from the Wilmer Institute on Results Obtained in Treatment of Myopia by Visual Training. A. C. Woods.—p. 28.
Eye Conditions Among Children of Premature, Full Term and Hypermature Birth. T. H. Eames.—p. 57.
Vision in Industry. I. B. Lueck.—p. 63.
Visual Test for Infants. J. N. Evans.—p. 73.
Repeatability of Keratometric Readings. R. E. Bannon and Rita Walsh. —p. 76.

Treatment of Myopia by Visual Training.—A series of 103 myopic persons were selected from a total of 130 applicants. The uncorrected visual acuity of these patients was recorded, a cycloplegic was instilled and the retinoscopic and static refractions were determined. At the end of the visual training the patients were again examined. It was found that 30 of these patients showed a low grade improvement on all charts. This improvement averaged an increase of 27 points in the percentage visual acuity. A second group of 31 patients did not show a consistent improvement on all four charts but did show an overall improvement in both eyes which averaged 14.7 points increase in the percentage visual acuity. The improvement in these two groups was not consistently maintained. A third group of 32 patients did not show any change in the percentage visual acuity. A fourth group of 10 patients showed a decrease in the percentage visual acuity of 10.8 points. The changes in the percentage visual acuity noted was found to lie within the limits of error of subjective testing. It was believed by the examiners that education in the correct interpretation of a blurred visual image was the chief factor in the improvement noted in this group. It was further believed that the exercises produced a beneficial psychologic reaction in certain patients toward their visual handicap. The visual training used on these patients was not of value in the treatment of myopia.

Am. J. Roentgenol. & Rad. Therapy, Springfield, Ill.

54:541-768 (Dec.) 1945

Chronology of Röntgen's Life. O. Glasser.—p. 541.
Scientific Forefathers of Röntgen. O. Glasser.—p. 545.
Postwar Visit to Röntgen's Laboratory. L. E. Etter.—p. 547.
Protection Against High Energy Roentgen Rays: Caldwell Lecture, 1945. G. Failla.—p. 553.
Experiences with Roentgen Ray Tube. W. D. Coolidge.—p. 583.
Early American Roentgenograms. O. Glasser.—p. 590.
Roentgen Examination in Occupational Diseases of Lungs: Historical Discussion of Its Use. E. P. Pendergrass.—p. 595.
Fifty Years of Roentgen Rays in Gastroenterology. J. T. Case.—p. 607.
Roentgen Diagnosis in Urologic Disorders. B. H. Nichols.—p. 626.
Background and Beginning of Cholecystography. B. R. Kirklin.—p. 637.
Development of Modern Neuroroentgenology. L. M. Davidoff.—p. 640.
Early History of Roentgenology of Sinuses. R. Spillman.—p. 643.
History of Roentgen Ray in Study of Heart. H. Roesler.—p. 647.
History of Use of Roentgen Ray in Warfare: Caldwell-Carman Lecture, 1944. L. Reynolds.—p. 649.
Army Roentgen Ray Equipment Problem. A. A. de Lorimier and M. Dauer.—p. 673.
History of Dosimetry in Roentgen Therapy. E. H. Quimby.—p. 688.
Utilization of Antibody for Localization of Metals and Dyes in Tissues: Preliminary Report. L. A. McClintock and M. M. Friedman.—p. 704.
Salient Factors in Treatment of Hodgkin's Disease and Lymphosarcoma with Roentgen Rays. A. U. Desjardins.—p. 707.
Biologic Evaluation of 20 Million Volt Roentgen Rays: Acute Roentgen Death in Mice. H. Quastler and R. K. Clark.—p. 723.
Hookworm Disease: Small Intestinal Study. P. J. Hodes and G. P. Keefer.—p. 728.

American Journal of Surgery, New York

71:1-166 (Jan.) 1946

Physick-Sellheim Principle of Extraperitoneal Cesarean Section: Elucidation of Technic Based on 175 Cases. J. V. Ricci and J. P. Marr. —p. 3.
Saddle Block Anesthesia. J. Adriani and D. Roman-Vega.—p. 12.
Chronic Lumbar Backache. C. A. Splithoff.—p. 19.
Causes of Death in Burned Patients: Report of 23 Deaths in 744 Burned Patients. A. G. Bettman.—p. 26.
Contiguous Skin Flaps for Wounds of Extremities. L. R. Rubin.—p. 36.
*Studies on Neuromuscular Dysfunction: Neostigmine Therapy of Chronic Disability Following Fractures: Report of 51 Cases. H. Kabat and C. W. Jones.—p. 55.
Diabetic Amputations: Amputation of Lower Extremity in Diabetics—Analysis of 128 Cases. A. Mandelberg and W. Sheinfeld.—p. 70.
Towel for Use in Thigh Amputations. R. H. Lawler.—p. 77.
Treatment of Finger Fractures, Simple and Compound: Finger Amputations. G. J. Curry.—p. 80.

Neostigmine Therapy of Disability Following Fractures.—Kabat and Jones report on neostigmine therapy of 51 patients for neuromuscular dysfunction resulting from trauma. Twenty-three of the 51 patients had fractures of the upper extremity, 17 had fractures of the lower extremity, 7 had fractures of the vertebrae and 4 had multiple fractures. Excluding the disabilities which had been present longer than five years, the average duration of the disability was 11.2 months. Of 20 patients who were given daily injections of saline solution for one week as a placebo, only 2 showed improvement. Neostigmine was usually administered for two to three weeks. This treatment resulted in significant improvement in 39 of the 51 patients. Of the remaining 12, 4 showed slight improvement while the other 8 were without improvement. It has been possible to follow 27 of the 39 patients who showed significant improvement from neostigmine therapy for one to eight months after treatment was discontinued. In all except 1 the improvement was retained after cessation of drug administration. The therapeutic value of neostigmine in the treatment of chronic disability following fractures emphasizes the important role of neuromuscular dysfunction in these disabilities.

American Journal of Tropical Medicine, Baltimore

25:447-540 (Nov.) 1945

*Effect of Cox Type Vaccine on Louse Borne Typhus Fever: Account of 61 Cases of Naturally Occurring Typhus Fever in Patients Who Had Previously Received One or More Injections of Cox Type Vaccine. R. S. Ecke and others.—p. 447.
Ineffectiveness of Intensive Mapharsen, Bismuth and Carbarsone as Curative Drugs for Chronic Malaria. S. Spector, J. W. Haviland and L. T. Coggeshall.—p. 463.
Pigmentation of Palate and Subungual Tissues Associated with Suppressive Quinacrine Hydrochloride Therapy. V. W. Lippard and G. L. Kauer Jr.—p. 469.
Complement Fixation in Relapsing Plasmodium Vivax Malaria. Anna D. Dulaney and R. B. Watson.—p. 473.
Scrub Typhus. J. S. Browning, M. Raphael, E. F. Klein and A. Coblenz. —p. 481.
Observations on Incidence of Wuchereria Bancrofti Larvae in Native Population of Solomon Islands Area. R. J. Schlosser.—p. 493.
Concentration Method for Demonstrating Microfilariae in Blood. J. S. Harris and W. A. Summers.—p. 497.
Portuguese Man of War Stings: Case Report. H. J. Frachtman and W. T. McCollum.—p. 499.
Anopheles Punctimacula D. & K. as Vector of Malaria in Medellin, Colombia, South America. H. Rey, H. Soto and C. B. Huffaker. —p. 501.
Two Exogenous Cases of Visceral Leishmaniasis (Kala Azar) in United States, with Notes on Cultivation of Leishmania Donovani in Vitro. E. J. Munter and A. Packchanian.—p. 507.
Report on Case of Balantidiasis. H. Tsuchiya and B. Kenamore.—p. 513.
Fresh Laboratory Material for Teaching Medical Parasitology. G. F. Otto.—p. 515.
Lepromin Skin Tests in Boeck's Sarcoid. K. D. Weeks and D. T. Smith.—p. 519.
Reaction to Lepromin of Patients with Sarcoid or Tuberculosis Compared with That of Patients in General Hospitals, with Discussion of Mechanism of Reaction. G. T. Harrell and S. F. Horne.—p. 523.

Effect of Cox Type Vaccine on Louse Borne Typhus.—Ecke and his associates report 61 cases of naturally occurring louse borne typhus in patients who had received, previous to the onset of illness, one or more injections of 1 cc. of ether extracted Cox type yolk sac vaccine equivalent in concentration to 10 per cent yolk sac suspensions of rickettsias of epidemic typhus. The patients who received two or more doses of vaccine twenty-one days or more before the onset of typhus had the mildest course and the shortest febrile period. The only fatality was of a patient who received one dose of vaccine only three days

before the onset of illness. The vaccine reduced the mortality as well as the severity of naturally acquired typhus as it occurs under conditions which prevail during epidemics. The longest interval observed between the last dose of vaccine and the onset of typhus was 325 days. Most of the intervals were less than 100 days. It is possible that the administration of vaccine during the incubation period of typhus will lessen the severity of illness.

American Review of Tuberculosis, New York

53:1-102 (Jan.) 1946

"Speed of Reaction" Hypothesis: II. Further Numerical Implications Regarding Tuberculosis. H. W. Hill.—p. 1.
Electrocardiograms in Chronic Pulmonary Disease: Theoretical Interpretation. E. Goldberger and S. P. Schwartz.—p. 34.
Bronchiolar Spasm as Cause of Reexpansion of Lung Following Intrapleural Pneumonolysis. O. C. Brantigan and R. Hoffman.—p. 52.
Respiratory Malformations: Types, Causes and Significance: Preliminary Report. H. Jordan.—p. 56.
Effect of Purified Fractions of Tuberculin on Tuberculin Sensitive Tissue: Quantitative Studies on Tissue Cultures. Dorothy H. Heilman and Florence B. Seibert.—p. 71.
Tuberculostatic Action of Sodium Salts of Certain Synthetic Alicyclic Acids. E. W. Emmart.—p. 83.

Annals of Internal Medicine, Lancaster, Pa.

23:915-1058 (Dec.) 1945

Idiosyncratic Febrile Reactions to Thiouracil: Clinical Characteristics and Possible Pharmacologic Significance. Janet W. McArthur, R. W. Rawson and J. H. Means.—p. 915.
Meningococcic Infections, with Special Reference to Certain Diagnostic Considerations: Analysis of 37 Cases. A. C. Oxman and I. Fischer. —p. 924.
Chronic Hemolytic Anemia with Paroxysmal Nocturnal Hemoglobinuria. R. C. Manchester.—p. 935.
Infectious Mononucleosis: Clinical Study of 63 Cases. A. L. Kruger, A. W. Wallace and S. J. Penchansky.—p. 945.
Bronchiolithiasis: Report of 10 Cases. J. R. Fox and L. H. Clerf. —p. 955.
Amebiasis: Report of 39 Cases Observed in Army General Hospital Stationed in Northern Ireland. J. N. Edson, A. P. Ingegno and J. B. D'Albora.—p. 960.
Hypersensitivity and Rheumatic Fever: Part I. J. K. Aikawa.—p. 969.
Id.: Part II. Relation of Rheumatic Fever to Hypersensitivity. J. K. Aikawa.—p. 983.

Annals of Otol., Rhin. and Laryngology, St. Louis

54:649-846 (Dec.) 1945

*Use of Radium in Aerotitis Control Program of Army Air Forces: Combined Report by the Officers Participating. J. E. Hendricks, D. H. Earl and others.—p. 649.
Further Experiments in Production of Negative Pressure in Trachea and Frontal Sinus by Ciliary Action. A. C. Hilding.—p. 725.
"Postnasal Drip": Current American Nightmare. A. W. Proetz.—p. 739.
Nasal Psychosomatic Syndromes Accompanying and Following Acute Anxiety. W. L. Post.—p. 747.
Use of Tantalum in Radical Frontal Sinus Surgery. R. L. Goodale. p. 757.
Pneumosinus Dilatans. H. Brunner, I. G. Spiesman and J. J. Theobald. —p. 763.
Treatment of Suppurative Paranasal Sinusitis with Repeated Irrigations of Penicillin: Negative Report. R. E. Priest.—p. 786.
Photography Through Nasopharyngoscope. J. E. Hendricks.—p. 797.
Ménière's Syndrome: Validity of Intradermal Histamine Test. M. Atkinson.—p. 801.
Mixed Salivary Tumor in Right Tonsil Fossa with Narcolepsy and Cataplexy. C. E. H. Bates.—p. 812.

Radium in Control of Aerotitis.—This combined report is based on studies conducted on flying personnel in the European and Mediterranean theaters of operation by medical officers. Aerotitis due to inability to ventilate the middle ear during flight has been a major cause of disability in flying personnel. Treatment was based primarily on the elimination of hyperplastic lymphoid tissue in the nasopharynx, which is the most common cause of eustachian tube malfunction. Irradiation of such tissue with radium was chosen as the best and most practical method of treatment to remove the mechanical factor which predisposes to aerotitis and to remove tissue that harbors pathogenic organisms which precipitate attacks of nasopharyngitis. These infections not only increase the susceptibility of the flier to aerotitis but are responsible for much loss of flying time. Of the 6,881 patients selected for treatment only 1,129 were available for observation. The following conclusions were reached: 1. The use of the nasopharyngeal radium applicator is a safe, practical and effective method of irradiating hyperplastic lymphoid tissue in the nasopharynx. 2. Irradiation of the nasopharynx causes a regression of lymphoid tissue and improves ability to ventilate the middle ear. 3. Irradiation of hyperplastic lymphoid tissue about the eustachian tube orifice is an effective prophylactic measure for aerotitis in flying personnel. 4. Radium therapy is an advance in the control of recurrent aerotitis.

Archives of Ophthalmology, Chicago

34:357-486 (Nov.-Dec.) 1945

Evaluation of Stereopsis: Comparison of Howard-Dolman and Verhoeff Test. A. E. Sloane and J. R. Gallagher.—p. 357.
Iridencleisis Operation for Glaucoma. A. B. Reese.—p. 360.
Effect of Talc in Ocular Surgery. M. Chamlin.—p. 369.
Scleral Flap Incision with Scleral Sutures for Cataract Operation. C. Hymes.—p. 374.
Law of Physiologic Aging as Derived from Long Range Data on Refraction of Human Eye. F. Bernstein.—p. 378.
Accommodation of Presbyopia and Its Correction. F. J. Slataper. —p. 389.
Removal of Dislocated Lens Under Conjunctival Pocket Flap. R. S. Irvine.—p. 398.
Foster Kennedy Syndrome with Post-Traumatic Arachnoiditis of Optic Chiasm and Base of Frontal Lobes. H. E. Yaskin and B. J. Alpers. —p. 399.
Hypertensive Retinopathy Associated with Adrenal Medullary Tumor (Pheochromocytoma): New Clinical Entity. F. H. Rodin.—p. 402.
Changes of Labyrinthine Excitability in Lesions of Optic Tract or External Geniculate Body. E. A. Spiegel and N. P. Scala.—p. 408.
Ocular Varicella: Report of Case of Corneal Phlyctenule. H. F. Falls and J. G. Beall.—p. 411.
Gonioscopy Simplified by Contact Prism. L. Allen and C. S. O'Brien. —p. 413.
Development of Secretory Function of Ciliary Body in Rabbit Eye Evaluated from Ascorbic Acid Concentrations and Changes in Volume. V. E. Kinsey, Blanche Jackson and T. L. Terry.—p. 415.
Relation of Visual Acuity to Myopia. M. J. Hirsch.—p. 418.
Melanoma of Skin with Intraocular and Orbital Metastases: Report of Case. J. R. Lisa and I. Givner.—p. 422.
Congenital Bilateral Subluxation of Lens: Report of a Family. R. R. Chace.—p. 425.
Complications Incident to Simple Intracapsular Extraction: Some Procedures Designed Toward Prevention. F. Bracken.—p. 427.
Blepharoptosis. R. N. Berke.—p. 434.

Archives of Otolaryngology, Chicago

42:309-452 (Nov.-Dec.) 1945

*Herpes Zoster Auris ("Geniculate" Ganglionitis): Report of 8 Cases, with Photographs of So-Called Syndrome of Ramsay Hunt. H. O'Neill. —p. 309.
Penicillin Therapy in Practice of Otolaryngology. G. C. Struble.—p. 327.
Histopathology of Incus and Head of Malleus in Cases of Stapedial Ankylosis. J. Lempert and Dorothy Wolff.—p. 339.
Hyperplastic Sinopharyngostomatitis: Manifestation of Borderline Allergy Resulting in Fetor ex Oris, Snoring and Globus Hystericus. N. Fox and R. G. Kesel.—p. 368.
Prognosis of Recurrent Nerve Paralysis Following Thyroidectomy. A. F. Laszlo and C. O. Fiertz.—p. 372.
*Treatment of Chronic Suppurative Otitis Media with Penicillin. J. J. Conley.—p. 374
Stripping of Vocal Cords. J. M. Loré.—p. 378.
Neglected Septal Cartilage Graft, with Experimental Observations on Growth of Human Cartilage Grafts. L. A. Peer.—p. 384.
Neoplasms of Both Maxillary Sinuses. M. D. Berger.—p. 397.
Atrophic Rhinitis and Ozena. W. M. Fitzhugh Jr.—p. 404.
Occupational Deafness, with Special Reference to Chronic Occupational Deafness. A. Goldner.—p. 407.
Nonvirulent Diphtheria. G. F. Harkness.—p. 412.
Tumors of Nose and Throat. G. B. New and E. L. Foss.—p. 421.
Tonsils and Adenoids. J. D. Singleton.—p. 428.

Herpes Zoster Auris ("Geniculate" Ganglionitis).—O'Neill believes that herpes zoster auris presents itself in several forms, some of which are primarily involvements of the trigeminal, of the second cervical and of the vagal ganglion. That the geniculate ganglion, as any cranial sensory ganglion, may also be involved cannot be denied, but that such involvement constantly produces otalgia and aural herpes zoster, with or without facial paralysis, as Hunt has asserted, is not in accordance with clinical data. To proclaim that all aural, circumaural and juxta-aural herpes lies in the domain of the geniculate ganglion is an unproved assertion. Hunt recognized the possibility of involvement of cranial sensory ganglions other than the geniculate, but such involvement to him was always secondary and subsidiary to geniculate involvement. In this connection the author mentions 1 of his cases in which an attack of severe neuritis in the second cervical dermatome was followed by aural zosteriform vesiculation, not in Hunt's original zone of the geniculate ganglion but in the expanded zone of the wandering sensory fibers of the seventh nerve. In this case Hunt's explanation is totally unsatisfactory.

O'Neill thinks that until necropsy evidence substantiates more completely than it has Hunt's assumptions that the geniculate ganglion not only sensorily innervates Hunt's primary cone, the concha, the tragus, the antitragus and the auditory canal but also at times the postaural region, the nares and the palate, herpetic involvements of these alleged seventh nerve regressive areas should not be referred to as examples of "Hunt's syndrome." Aural herpes occurs not only in gasserian and cervical ganglionitis but probably also in vagal or glossopharyngeal ganglionitis. Again, otalgia may be a symptom of either cervical, fifth, seventh, ninth or tenth ganglionic infection, and the remaining member of the triad, facial paralysis, is a motor disorder of the seventh nerve, its presence neither proving nor disproving a seventh nerve sensory involvement.

Penicillin in Chronic Suppurative Otitis Media.—Thirty young soldiers, whose average age was 26 and whose chief complaints were draining ears, were treated by Conley with large doses of a sulfonamide followed by penicillin. Many previously had had courses of treatment with penicillin and sulfonamide compounds without improvement. Six presented a history of trauma from artillery concussion, with resultant perforation of the tympanic membrane and infection. The remainder had complications with acute infectious processes. The beta hemolytic type of streptococcus and the hemolytic type of Staphylococcus aureus were isolated in approximately 50 per cent of the cases. The plan was to treat the patients first with sulfadiazine and to follow with penicillin in those not responding. Twenty-eight patients were treated with penicillin. It was found that penicillin therapy was of little help for patients whose chronic suppurative otitis media had proved resistant to sulfonamide compounds. The response of chronic suppurative otitis media to systemic treatment with sulfadiazine followed by 1,000,000 units of penicillin was insignificant. The response of chronic suppurative otitis media to local penicillin therapy was good; 53 per cent of the ears were definitely improved. Granulation tissue and cholesteatoma are not affected by sulfadiazine or penicillin whether administered generally or locally. Emphasis should be placed on antritis and epitympanitis and an attempt made to diagnose these conditions. The best treatment for acute and chronic suppurative otitis media is to prevent their occurrence by the prophylactic use of one or both of the chemical or biologic therapeutic agents.

Archives of Surgery, Chicago

51:205-324 (Nov.-Dec.) 1945

Pancreatitis: Anatomic Study of Pancreatic and Extrahepatic Biliary Systems. W. F. Rienhoff Jr. and K. L. Pickrell.—p. 205.
Sludged Blood in Traumatic Shock: I. Microscopic Observations of Precipitation and Agglutination of Blood Flowing Through Vessels in Crushed Tissues. M. H. Knisely, T. S. Eliot and E. H. Bloch.—p. 220.
*New Treatment for Postoperative Pulmonary Collapse. E. H. Grandstaff.—p. 237.
*Electrolyte Changes and Chemotherapy in Experimental Burn and Traumatic Shock and Hemorrhage. S. M. Rosenthal and H. Tabor.—p. 244.
*Gelatin Sponge, A New Hemostatic Substance: Studies on Absorbability. H. P. Jenkins and J. S. Clarke.—p. 253.
Breast Cancer and "Paget's Disease of the Breast." C. J. Costello.—p. 262.
Skeletal Fixation of Mandibular Fractures: Report of 5 Cases with 9 Fractures. H. D. Burke, D. L. Murphy and W. A. McNichols.—p. 279.
Progress in Orthopedic Surgery for 1944: VI. Congenital Dislocation of Hip. A. B. Gill.—p. 283.
Id.: VII. Tuberculosis of Bones and Joints. A. De Forest Smith.—p. 285.
Id.: VIII. Chronic Arthritis. J. G. Kuhns.—p. 289.
Id.: IX. Infantile Paralysis. C. E. Irwin.—p. 295.
Id.: X. Poliomyelitis. J. A. Toomey.—p. 306.
Id.: XI. Poliomyelitis: Convalescent Treatment and Related Subjects. R. L. Bennett.—p. 310.
Id. XII. Neuromuscular Disorders Exclusive of Poliomyelitis. W. M. Phelps.—p. 315.

New Treatment for Postoperative Pulmonary Collapse.—If pulmonary atelectasis or collapse develops, the patient should be placed on the unaffected side in a moderate Trendelenburg position. He should be instructed to cough, with some one holding his abdomen. Striking the patient on the back over the affected lung while encouraging him to cough will often help to dislodge the mucous plug. A new treatment consisting in cocainizing the throat with 5 to 10 per cent cocaine solution has been used in a number of cases, with almost instant cure. The cocaine solution in a cotton ball held in a curved applicator is placed far back in the throat and into the pyriform sinuses as if in preparation for a bronchoscopy. This procedure apparently relaxes the musculature of the bronchial tree enough so that within a few minutes the patient will cough up a large plug of mucus. Use of a small amount of epinephrine in the same cotton pledget will help stimulate the cough reflex. During the next twenty-four hours or more, use of intermittent inhalation of oxygen and carbon dioxide is continued, to keep respirations deep and to attempt to reexpand all bronchioles. Chemotherapy with sulfathiazole or sulfadiazine is begun and continued for twenty-four hours or longer to prevent pneumonia in the congested and airless area. The patient is rolled from one side to another frequently and made to continue to cough and take deep breaths. Cocainization of the throat has cured pulmonary collapse and has avoided the necessity of bronchoscopy.

Electrolyte Changes and Chemotherapy in Experimental Burn and Traumatic Shock.—The sodium, potassium and fluid changes have been studied quantitatively in traumatic shock in mice. The magnitude of these alterations and the high susceptibility of shocked animals to experimentally produced increases of sodium, potassium and fluid changes suggest that their combined effects may be an important factor in the mortality from shock. A high percentage of animals will survive an otherwise fatal burn, trauma or hemorrhage if isotonic solutions or sodium salts in amounts equivalent to 10 to 15 per cent of body weight are administered by any route during the first twenty-four hours. It is believed that current methods of treating shock are inadequate in regard to the quantity of isotonic sodium solution employed.

Gelatin Sponge, A New Hemostatic Substance.—Jenkins and Clarke tried an experiment to determine the behavior of the gelatin sponge in the tissues of animals. It was used without thrombin. Dogs were operated on by aseptic surgical technic. After the abdomen had been opened, incisions were made in the liver, the kidneys and the spleen. The hemorrhage was controlled by packing the moistened gelatin sponge into the incision and holding it in place for about two minutes with ordinary moistened gauze. When the gauze was removed, the gelatin sponge was usually adherent in the incision and the bleeding stopped. Gelatin sponge was also implanted in the omentum and in the rectus muscle near the abdominal incision. The animals were killed at periods varying from two to fifty-six days after the implantation. The experiments demonstrated that gelatin sponge is a bland substance which is slowly absorbed in the tissues over a period of about five weeks. Gelatin sponge was used also in 15 clinical cases in incisions in the liver to obtain specimens for biopsy, on the under surface of the liver after cholecystectomy, on thyroid beds after thyroidectomy, on dermatome donor areas, in laparotomy wounds and on the surface of granulating wounds. Bleeding was controlled and there were no complications which might be attributed to the use of the gelatin sponge. It appears to be useful wherever fibrin foam or oxidized cellulose have been proved to be of value.

Bulletin of Johns Hopkins Hospital, Baltimore

77:411-460 (Dec.) 1945

Control of Experimental Pneumonia with Penicillin: I. Comparison of Inhalation and Injection Therapy. Catherin E. Wilson, Caroline W. Hammond, Anne F. Byrne and Eleanor A. Bliss.—p. 411.
*Sodium Caprylate: New and Effective Treatment for Dermatomycosis of Feet. E. L. Keeney, L. Ajello, Elsie Lankford and Lois Mary.—p. 422.
Bacteriostatic and Bactericidal Effects of Fatty Acid Salts on Bacteria in Broth Cultures. E. L. Keeney, Elsie Lankford and L. Ajello.—p. 437.
Observations on Incidence of Tinea Pedis in Group of Men Entering Military Life. L. Ajello, E. L. Keeney and E. N. Broyles.—p. 440.

Sodium Caprylate for Dermatomycosis of Feet.—Keeney and his associates found that 10 per cent sodium caprylate ointment in vitro completely inhibited the growth of Trichophyton mentagrophytes. It was significantly superior to propionate-propionic acid, 5 and 10 per cent undecylenate-undecylenic acid and one-half and full strength Whitfield's, 10 per cent ammoniated mercury, 5 per cent sulfathiazole

and 0.5 per cent tyrothricin ointments. The clinical results obtained with 10 per cent sodium caprylate ointment in the treatment of dermatomycosis of the feet were significantly superior to results previously obtained and reported on by employing either propionate-propionic acid or undecylenate-undecylenic acid ointments. The authors have not observed irritation or sensitization from the daily and protracted use of 10 per cent sodium caprylate ointment. Ten per cent sodium caprylate ointment allays itching and does not sting or burn those areas of skin where the epithelium has been denuded.

Canadian Journal of Public Health, Toronto

37:1-42 (Jan.) 1946

Tuberculosis Control. G. C. Brink.—p. 1.
Tuberculin Testing. F. O. Wishart and L. A. Pequegnat.—p. 7.
Food and Agriculture Organization of United Nations. L. B. Pett. —p. 12.
Pasteurization in Province of Quebec, with Special Reference to Montreal. A. Groulx.—p. 17.
Observations on Calcium Content of Cow's Milk. E. M. Semmons and E. W. McHenry.—p. 22.
Composition of Commercial Ice Cream. E. A. Grant and W. C. Henry. —p. 26.

Canadian Medical Association Journal, Montreal

54:1-94 (Jan.) 1946

Observations on Treatment of Infantile Paralysis in Acute State. J. A. Toomey.—p. 1.
Bronchoscopy in Treatment of Pulmonary Atelectasis. R. A. Gordon. —p. 6.
Visual Signs in Diagnosis. S. W. Smith.—p. 10.
Results of Random Chest X-Ray Survey of Healthy Troops in Canada. R. W. Boyd.—p. 16.
Forward Abdominal Surgery: Analysis of 230 Cases. R. B. Eaton. —p. 19.
*Treatment of Obesity by Appetite Depressing Drugs. Leonora Hawirko and P. H. Sprague.—p. 26.
Study of Causes of Blindness in Over 12,000 Cases in Canada. F. A. Aylesworth.—p. 30.
Anatomic Clinics. I. M. Thompson.—p. 33.
Some Features of Dalhousie University Anatomy Course. D. Mainland. —p. 36.
*Benzyl Benzoate and Wool Dermatitis. S. J. Shane.—p. 39.
Cor Pulmonale. F. A. Willius.—p. 42.
Metastatic Carcinoma of Choroid. K. B. Johnston.—p. 46.
Simple Method for Spinal Anesthesia in Anorectal Surgery. F. B. Bowman.—p. 48.
Evaluation of Roentgen Pelvimetry. T. G. Stoddart.—p. 50.

Appetite Depressing Drugs in Obesity.—Hawirko and Sprague treated 162 persons for obesity. All were subjected to a physical examination and in a large percentage the basal metabolic rate was determined. The food intake was controlled by prescribing a 1,100 calory diet. Fluid and salt restriction was also advised. Amphetamine (benzedrine) sulfate 5 mg. at 8 a. m. and at 10 a. m. was prescribed for 14 of the group. In order to overcome excitability and insomnia of 6 patients d-amphetamine was substituted. For the subsequent patients d-amphetamine instead of amphetamine was prescribed as the appetite depressing drug. The dose used was 25 mg. one hour before each meal. This depressed the appetite sufficiently to enable the patient to follow the diet closely. It also avoided the discouragement and irritability which usually accompany rigid adherence to prolonged use of a low calory diet. When the weight became stationary in spite of strict adherence to treatment the d-amphetamine was increased to 5 mg. before the heaviest meal and eventually to 5 mg. before each meal. The maximum dose used was 15 mg. daily. Most patients whose basal metabolic rate was 0 or lower were given 1 grain (0.06 Gm.) of thyroid daily. Multiple vitamin pills were prescribed for all patients. Eight of the more obese patients were given 2 cc. of salyrgan intravenously at intervals of four days to two weeks. The duration of treatment varied from two to twelve months. Of 162 patients treated only 72 persevered with the treatment for more than two months. The amount of weight lost varied in proportion to the number of pounds the patient was overweight. The average weight loss was 5½ pounds (2.5 Kg.) per month. Two patients were unable to tolerate the d-amphetamine. Salyrgan is a valuable adjunct in the treatment of obesity, especially when there is great water retention. Six failures were observed, that is, they reduced less than 20 per cent of the number of pounds they were overweight. D-amphetamine is a useful appetite depressant drug in the treatment of obesity. It is a dextrorotary optically active isomer of racemic amphetamine (benzedrine).

Benzyl Benzoate Dermatitis and Wool Dermatitis.—In the permanent form of wool dermatitis in the soldier there is usually a history of repeated attacks of skin disease; the lesion is usually a folliculitis involving hairy areas in contact with the uniform. If, after the eruption has cleared in the hospital, the patient is allowed to wear battle dress in the ward, recurrence is early and dramatic. If patch tests are performed, discrete areas of folliculitis are produced. A secondary dermatitis not infrequently occurred following the benzyl benzoate treatment for scabies. It was emphasized that this type of dermatitis cleared on avoidance of wool and persisted under any other form of therapy unless the wearing of wool was interdicted. It was also noted that the skin reaction did not occur if benzyl benzoate treatment was administered on only one occasion but that it tended to supervene if the treatment was repeated within two weeks. When such contact dermatitis appears it should be distinguished from relapse of scabies, and lotio scabei therapy should not be pursued. Repeated application of lotio scabei should be discouraged, as the transient wool sensitivity which results may persist for an indefinite time.

Cancer Research, Baltimore

6:1-48 (Jan.) 1946

Carcinogenicity of p-Dimethylaminoazobenzene in Diets Containing Fatty Acids of Hydrogenated Coconut Oil or of Corn Oil. B. E. Kline, J. A. Miller, H. P. Rusch and C. A. Baumann.—p. 1.
Certain Effects of Dietary Fats on Production of Liver Tumors in Rats Fed p-Dimethylaminoazobenzene. B. E. Kline, J. A. Miller, H. P. Rusch and C. A. Baumann.—p. 5.
Desoxyribonucleic Acid in Epidermal Carcinogenesis Induced by Methylcholanthrene. C. Carruthers and V. Suntzeff.—p. 8.
Observations on Experimentally Produced Sarcomas of Pigeons. J. B. Murphy and E. Sturm.—p. 11.
Effects of Ultraviolet Radiation on 3,4-Benzpyrene and Other Polycyclic Aromatic Hydrocarbons: Absorption Spectrums and Some Chemical Properties of Water Soluble Products. C. B. Allsopp and B. Szigeti. —p. 14.
Id.: Role of Benzene in Photoreactions in Solutions Containing It. C. B. Allsopp and B. Szigeti.—p. 22.
Id.: Carcinogenic Activity of Aqueous Extracts from Irradiated 3,4-Benzpyrene. C. B. Allsopp.—p. 24.

Cincinnati Journal of Medicine

27:1-72 (Jan.) 1946

Clinical and Pathologic Observation of Cases of Head Injury. J. P. Evans.—p. 1.

27:73-150 (Feb.) 1946

Problems of Neuroses: Experimental Approach. J. H. Masserman. —p. 73.
Hepatitis: Newer Developments. L. Schiff.—p. 97.
Penicillin in Treatment of Gonorrhea: Results with 675 Women. Ruth B. Thomas and Edda Meyer.—p. 108.

Diseases of Chest, Chicago

12:1-88 (Jan.-Feb.) 1946

Management of Pure Tuberculous and Mixed Infection Empyemata. G. G. Ornstein and M. Herman.—p. 1.
Chronic Pleural Empyema: Its Surgical Treatment. J. B. Grow.—p. 26.
Evaluation of Various Surgical Procedures in Treatment of Pulmonary Tuberculosis. R. C. Matson, W. S. Conklin and S. Domm.—p. 40.
Treatment of Tuberculous Empyema. K. P. Klassen, M. D. Miller and G. M. Curtis.—p. 51.
Treatment of Tuberculous Empyemas with Tyrothricin. J. M. Donaldson Jr. and H. C. Samuel.—p. 61.
Tuberculous Empyema Treated with Vitamin A-D Concentrate: Preliminary Report. W. Raab.—p. 68.

Georgia Medical Association Journal, Atlanta

35:1-26 (Jan.) 1946

Prevention and Treatment of Pulmonary Embolism. J. G. Gay and W. H. Proctor.—p. 1.
Renal Ectopia. R. Bell.—p. 5.
Renal Decapsulation. E. Felber.—p. 7.
Use of Lanatoside C in Treatment of Congestive Heart Failure. E. Van Buren.—p. 9.
Treatment of Burns. L. H. Oden Jr.—p. 12.

Indiana State Medical Assn. Journal, Indianapolis

39:1-52 (Jan.) 1946

Indiana's Health Program. R. F. Gates.—p. 1.
Medicine in Postwar World. M. Fishbein.—p. 4.
Osteomyelitis: Treatment by Radical Saucerization and Early Skin Grafting. J. A. McClintock.—p. 9.
Relation Between Trauma and Malignant Disease. A. K. Harcourt and J. V. Reed.—p. 14.
Lung Abscess. P. D. Crimm.—p. 17.
Ménière's Syndrome. J. R. Lindsay.—p. 23.
Federal Income Tax and the Medical Profession. F. Shirley Wilcox. —p. 35.
Service to All of the People Is the Price of Medical Freedom. J. T. Oliphant.—p. 37.
Nursing Service Needs. Helen Teal.—p. 38.

Iowa State Medical Society Journal, Des Moines

36:1-38 (Jan.) 1946

Management of Patient with Colostomy. L. E. Moon.—p. 1.
Nitrate Levels in Water from Rural Iowa Wells: Preliminary Report. G. Johnson, Agnes Kurz, Josephine Cerny, Ann Anderson and G. Matlack.—p. 4.
Reduction Procedure for Cervical Spine Fractures: Preliminary Report. W. D. Abbot and E. M. George.—p. 7.

36:39-84 (Feb.) 1946

Results of Administration of Varying Doses of Sodium Bromide. C. H. Millikan and W. D. Paul.—p. 39.
Foot Deformities Corrected by Rubber Band Traction. R. E. Gunn. —p. 48.
Early Diagnosis and Treatment of Rheumatic Fever. J. L. Kestel. —p. 50.
Laënnec's Cirrhosis, with Patency of Umbilical Vein. J. E. Flynn. —p. 52.

Journal of Aviation Medicine, St. Paul

16:363-444 (Dec.) 1945

Carrier Organization and Operation. H. A. Smedal.—p. 364.
Pilots with Repeated "Pilot Inaptitude" Accidents. M. M. Kalez and R. C. Hovde.—p. 370.
Physiologic Study of Aviators During Combat Flying. R. E. Kirsch. —p. 376.
*Acute Otitic Barotrauma Resulting from Low Pressure Chamber Tests. C. B. Stewart, O. H. Warwick and G. L. Bateman.—p. 385.
Airsickness During Early Flying Training. A. Hemingway and E. L. Green.—p. 409.
Cardiovascular Changes in Motion Sickness. A. Hemingway.—p. 417.
Comparative Study of Effects of Exercise and Anoxia on Human Electrocardiogram. W. S. Baum, R. B. Malmo and R. F. Sievers.—p. 422.
Effects of Mild Anoxia on Neuromuscular Coordination in Skilled Investigators. H. T. Ricketts, W. R. Adams, A. S. Alving and others. —p. 429.

Acute Otitic Barotrauma Resulting from Low Pressure Chamber Tests.—Stewart and his associates, in training airmen in the use of protective equipment and of grading them for relative susceptibility to compression sickness, take them on low pressure "runs" to altitude pressures of from 25,000 to 35,000 feet. It was found that descent in the low pressure chamber at a rate of 1,000 to 2,000 feet per minute results in an erythema of the eardrum in approximately 50 per cent of personnel without any symptoms of otitic barotrauma. Even in cases in which only mild difficulty is experienced in equalizing pressure in the ears the drum usually shows a severe generalized hyperemia, and fluid is sometimes present in the middle ear. Permanent eustachian blockage is the cause of otitic barotrauma in only a small number of cases, but these men should be eliminated from aircrew training as early as possible. The incidence of difficulty in equalizing ear pressure on the first run was higher among 1,086 men suffering from an upper respiratory infection (16.5 per cent) than in 1,096 men without such infection (10.1 per cent). The occurrence of serious difficulty was only slightly higher in those with upper respiratory infections (4.1 per cent) as compared with those free from infection (3.0 per cent). Overemphasis on the dangers of a "head cold" has caused undue apprehension among airmen. There was a progressive decrease in the incidence of otitic barotrauma on four successive low pressure chamber runs, demonstrating the value of training, which is also substantiated by the fact that the incidence of otitic barotrauma was lowest in the aircrew with the most flying experience. Men who had difficulty in performing the Valsalva procedure successfully at ground level had a higher incidence of otitic barotrauma. Dental malocclusion may be a minor factor in increasing difficulty in equalizing ear pressure, but this difficulty can be overcome by training in the proper methods, especially by relaxing the muscles of the jaw and throat while carrying out the Valsalva procedure. Acute otitis media is rarely a complication of otitic barotrauma.

Journal of Bacteriology, Baltimore

50:491-612 (Nov.) 1945

New Species of Cephalosporium in Madura Foot (Cephalosporium Granulomatis). F. D. Weidman and A. M. Kligman.—p. 491.
Study of Diphtheroids Found in Infectious Bovine Pyelonephritis. E. S. Feenstra, F. Thorp Jr. and C. F. Clark.—p. 497.
Control of Contaminants in Penicillin Fermentations by Antiseptic Chemicals. S. G. Knight and W. C. Frazier.—p. 505.
Chemical Changes in Submerged Penicillin Fermentations. H. Koffler, R. L. Emerson, D. Perlman and R. H. Burris.—p. 517.
Effect of Certain Chemicals on Penicillin Production and Mold Metabolism in Shake Flask Fermentations. H. Koffler, S. G. Knight, R. L. Emerson and R. H. Burris.—p. 549.
Method for Rapid Preparation of Löffler's and Petroff's Media. A. R. Foster and C. Cohn.—p. 561.
Some Artifacts Encountered in Stained Preparations of Tubercle Bacilli: Much Granules and Beads. K. R. Porter and D. Yegian.—p. 563.
New Salmonella Type Isolated from Man. L. A. Barnes, W. B. Cherry and W. A. Myers.—p. 577.
Toxicity and Antibiotic Activity of Kojic Acid Produced by Aspergillus Luteo-Virescens. H. E. Morton, W. Kocholaty, R. Junowicz-Kocholaty and A. Kelner.—p. 579.
Identification of Neisseria Gonorrhoeae by Means of Bacterial Variation and Detection of Small Colony Forms in Clinical Material. H. E. Morton and Joan Shoemaker.—p. 585.
Amount of Carbon Dioxide Supplied for Primary Isolation of Neisseria Gonorrhoeae. H. E. Morton.—p. 589.
Revival of Organisms Presumably Killed by Phenol. L. H. Flett, R. C. Haring, A. F. Guiteras and Rebecca L. Shapiro.—p. 591.
Remarkable Fission Yeast, Schizosaccharomyces Versatilis Nov. Sp. L. J. Wickerham and E. Duprat.—p. 597.

Journal of Clinical Investigation, Boston

24:775-924 (Nov.) 1945. **Partial Index**

Epidemic of Acute Respiratory Disease Associated with Atypical Pneumonia. L. Breslow.—p. 775.
Effect of Alterations in Blood Volume on Anemia and Hypoproteinemia of Human Malaria. H. A. Feldman and F. D. Murphy.—p. 780.
Chemical, Clinical and Immunologic Studies on Products of Human Plasma Fractionation: XXIX. Serum Albumin as Diluent for Rh Typing Reagents. J. W. Cameron and L. K. Diamond.—p. 793.
*Id.: XXX. Use of Salt-Poor Concentrated Human Serum Albumin Solution in Treatment of Chronic Bright's Disease. G. W. Thorn, S. H. Armstrong Jr., V. D. Davenport, L. M. Woodruff and F. H. Tyler. —p. 802.
Toxic Factors in Experimental Traumatic Shock. I. T. Nathanson, A. L. Nutt, A. Pope, P. C. Zamecnik, J. C. Aub, A. M. Brues and S. S. Kety.—p. 829.
Some Observations on Effect of Injected Cytochrome C in Animals. S. Proger, D. Dekaneas and G. Schmidt.—p. 864.
Effect of Iodine on Thyroid Gland in Graves' Disease When Given in Conjunction with Thiouracil: Two-Action Theory of Iodine. R. W. Rawson, F. D. Moore, W. Peacock, J. H. Means, O. Cope and Charlotte B. Riddell.—p. 869.
*Circulation and Respiration During Episode of Chill and Fever in Man. M. D. Altschule, A. S. Freedberg and M. J. McManus.—p. 878.
Estimation of Hepatic Blood Flow in Man. S. E. Bradley, F. J. Ingelfinger, G. P. Bradley and J. J. Curry.—p. 890.
*Absorption and Excretion of Streptomycin in Human Chronic Typhoid Carriers. D. D. Rutstein, R. B. Stebbins, R. T. Cathcart and R. M. Harvey.—p. 898.

Salt-Poor Albumin in Nephrosis.—Thorn and his associates administered salt-poor concentrated human serum albumin intravenously for periods varying between one and thirty days at a dosage of 50 Gm. a day and a rate of 10 Gm. an hour to a group of 7 patients in several stages of chronic nephritis maintained on a diet adequate in calories, containing 80 to 125 Gm. of protein daily and low in sodium chloride. In patients with edema, low serum proteins and absent to moderate hypertension and nitrogen retention, albumin in this dosage was a safe agent in increasing the serum albumin level and in inducing positive nitrogen balance. The diuretic effect of salt-poor albumin was most striking in the severe nephrotic state with massive edema. Control studies with amino acid mixtures administered by mouth and intravenously and with mercupurin did not yield diuresis under these circumstances. The diureses following albumin proceeded at a constant rate only during the period of administration. Following short periods of therapy (ten days or less) the ability to maintain weight loss was roughly related to the slope and direction of the patient's weight curve on the basal regimen. In the 1 instance of prolonged (thirty day) therapy in nephrosis a previously rapidly ascending weight

curve became flat following diuresis of 20 Kg., although the patient was still edematous. In contrast to its effect on nephrotic anasarca, the diuretic effect of salt-poor albumin in the presence of minimal edema was slight. Although control studies showed that both amino acid mixtures in comparable quantities and urea (20 Gm. daily) were likewise ineffective, massive doses of urea (90 Gm. a day), when tolerated, appeared to induce further diuresis and weight loss of a transient character. Albumin administration in the presence of severe hypertension or nitrogen retention and in the absence of edema appeared contraindicated owing to its efficacy in rapidly increasing blood volume beyond the tolerance of the cardiovascular system.

Circulation and Respiration During Fever.—Altschule and his co-workers studied changes in the respiratory and circulatory functions of 8 patients following the intravenous injection of typhoid vaccine. The febrile reaction consisted of 4 phases: (*a*) prodrome, (*b*) chill, (*c*) flush, (*d*) defervescence. Each had distinctive clinical features and, except for the prodrome, each was characterized by physiologic phenomena. The chill phase was characterized by intense vasoconstriction, decreased cardiac output, slowed circulation time, hyperventilation, alkalosis and oliguria. There was an initial hypertension followed by hypotension and, in some experiments, shock. The flush phase was characterized by severe vasodilatation, drenching sweats, increased cardiac output, accelerated circulation time, a lesser degree of hyperventilation, maintained alkalosis, diuresis and in many experiments a sudden fall in blood pressure at the onset of the phase. Defervescence was characterized by a return of all mechanisms toward normal. Lymphatic function was apparently increased in the flush phase. No change in circulating plasma volume occurred during the febrile reaction.

Streptomycin in Human Typhoid Carriers.—Rutstein and his associates selected chronic typhoid carriers as subjects for this study for several reasons: they were as relatively "normal" individuals as could be found in the population of the hospital and, in addition, provided an opportunity to study the effect of streptomycin on the typhoid carrier state. Streptomycin was administered every three hours in a dosage of 75,000 and 150,000 units intramuscularly and 31,250 units orally. Following intramuscular administration of streptomycin approximately 60 to 70 per cent of the drug was excreted in the urine during a twenty-four hour period. Appreciable amounts of the drug were not absorbed from the gastrointestinal tract following repeated administration of capsules containing 31,250 units. Blood concentrations of streptomycin following administration of 75,000 units intramuscularly every three hours ranged from 0 to 6 units per cubic centimeter and when the dose was increased to 15,000 units every three hours, the level rose from 5 to 20 units per cubic centimeter. Certain toxic manifestations were noted. At a dosage level of 75,000 to 150,000 units intramuscularly every three hours, significant bacteriostatic effect on the typhoid bacilli in the stool was not obtained. Following oral administration of 31,250 units every three hours, a definite transitory bacteriostatic effect on the typhoid bacilli in the stool was obtained in 2 of 3 patients.

Journal of Experimental Medicine, New York

82:375-476 (Dec.) 1945

Influence of Choline, Cystine and Alpha Tocopherol on Occurrence of Ceroid Pigment in Dietary Cirrhosis of Rats. J. Victor and A. M. Pappenheimer.—p. 375.
Biochemical, Biophysical and Immunogenic Properties of Japanese B Type Encephalitis Virus and Vaccines. C. E. Duffy and W. M. Stanley.—p. 385.
Plasma Protein Metabolism — Electrophoretic Studies: Influence of Plasma Lipids on Electrophoretic Patterns of Human and Dog Plasma. L. J. Zeldis, E. L. Alling, A. B. McCoord and J. P. Kulka.—p. 411.
Enduring Immunity Following Vaccination of Mice with Formalin Inactivated Virus of Russian Spring-Summer (Far Eastern, Tick Borne) Encephalitis: Correlation with Serum Neutralizing and Complement Fixing Antibodies. J. Casals and P. K. Olitsky.—p. 431.
Prevention of Pneumococcal Pneumonia by Immunization with Specific Capsular Polysaccharides. C. M. MacLeod, R. G. Hodges, M. Heidelberger and W. G. Bernhard.—p. 445.

Journal of International College of Surgeons, Chicago

8:502-583 (Nov.-Dec.) 1945

Variations in Blood Supply of Liver, Gallbladder, Stomach, Duodenum and Pancreas: Summary Based on One Hundred Dissections. N. A. Michels.—p. 502.
Bone Plastic Reamputation. N. N. Blokhin.—p. 505.
Bone Plastic Reamputation of Thigh. A. Kotov.—p. 509.
New Method of Articulation of Femur for Difficult Cases After Fracture of Neck of Femur. J. W. S. Esser.—p. 512.
Pilonidal Dimple, Sinus, Cyst and Abscess. A. J. Cantor.—p. 514.
Principles of Skin Grafting. R. H. Ivy.—p. 520.
Hernia into the Duodenojejunal Fossa (Hernia of Treitz): Report of 3 Cases. M. J. Biermann.—p. 525.
Diabetic Gangrene Involving the Sinuses. B. R. Dysart.—p. 529.
Uncomplicated Cecitis: Report of Case. C. J. DePrizio.—p. 534.
Relation of Gastric Acidity to Recurrent Ulcers After Partial Gastrectomy. A. Winkelstein.—p. 539.
Surgery of Common Bile Duct. M. Behrend.—p. 544.
Melanoblastoma with Systemic Metastatic Dermophilotropism. M. A. Manzanilla.—p. 562.
Melanoblastomas: Consideration of 13 Melanotic Neoplasms. C. Zuckermann.—p. 572.

Journal of the Mount Sinai Hospital, New York

12:905-960 (Nov.-Dec.) 1945

Role of Castration as Auxiliary Treatment in Carcinoma of Breast: Report of Case. B. S. Wolf.—p. 907.
Role of Infection in Thyroid Crisis. E. S. Cohen.—p. 917.
Hitherto Undescribed Anomaly of Extrahepatic Bile Ducts and Blood Vessels and Its Surgical Implications. S. J. Sarnoff.—p. 921.
Case of Chronic Metastatic Abscess of Costal Cartilage Due to Bacillus Pyocyaneus. D. Burdick.—p. 925.
Essays on Biology of Disease: Recent Advances in Psychosomatic Medicine. E. Moschcowitz.—p. 928.
Life's Later Years: Studies in Medical History of Old Age. F. D. Zeman.—p. 939.

Nebraska State Medical Journal, Lincoln

31:1-40 (Jan.) 1946

Conditions Which May Be Confused with Anginal Syndrome. F. W. Niehaus.—p. 5.
Mediastinal Cysts. E. A. Connolly.—p. 8.
Treatment of Major Burns in Naval Warfare. C. W. McLaughlin Jr.—p. 11.

New England Journal of Medicine, Boston

234:1-36 (Jan. 3) 1946

*Putrid Empyema. J. W. Strieder and J. P. Lynch.—p. 1.
*Early Diagnosis of Minimal Pulmonary Tuberculosis. I. D. Bobrowitz and R. E. Dwork.—p. 10.
Pentothal Sodium Anesthesia in Neurologic Surgery. E. W. Shannon and W. J. Gardner.—p. 15.
Agranulocytosis Following Mapharsen Therapy: Report of 2 Cases Treated with Penicillin. J. F. McManus.—p. 17.
Some Clinical Aspects of Social Medicine. I. M. Cannon.—p. 20.
Normal Laboratory Values.—p. 24.
Papillary Adenocarcinoma of Head of Pancreas, with Metastases to Common Bile Duct and Lung.—p. 28.

Putrid Empyema.—Strieder and Lynch found that among the 530 patients with acute empyema treated at Boston City Hospital in seven and a half years there were 90, or 17 per cent, with putrid empyema. The average incidence, however, appears to be from 5 to 10 per cent. Putrid empyema is usually secondary to some type of anaerobic infection of the lung. Most frequently it complicates a lung abscess or a gangrenous (fusospirochetal) pneumonitis, but bronchiectasis and tuberculosis are also listed among the primary diseases. Putrid empyema differs from postpneumonic or other pyogenic empyemas not only in etiology but also in bacteriology, pathology and clinical aspects. Clinically it is characterized when untreated by an acute onset with a rapid severe course and early fatal termination. In many patients the fluid is thin for some time. This characteristic should not be considered a criterion in treatment, for it is frequently noted that stabilization of the mediastinum occurs early in these patients. If the mediasinum is not stabilized, patients can receive the benefits of early and open operation. A review of the 90 cases reported demonstrates the value of early open operation. Zinc peroxide is of distinct value in postoperative treatment. Once the foul odor has disappeared and the hazard of open pneumothorax is in abeyance, these patients may be treated like those with the ordinary pyogenic empyema.

Minimal Pulmonary Tuberculosis.—To determine the factors that could aid an early diagnosis of tuberculosis, studies were made on 200 patients who were admitted to the sanatorium with lesions that were minimal according to the standards of the National Tuberculosis Association. Tuberculosis should be suspected at any age, in any occupation and with any type of social or economic background. Positive contact is not a clear diagnostic indication and was present in only 34 per cent of the patients. Close observation is, however, necessary for contact cases, since the incidence of tuberculous infection among them is high. Eighty-two per cent of patients with minimal tuberculosis had symptoms. This is contrary to the statement that minimal tuberculosis is asymptomatic. Minimal tuberculosis can simulate many other ordinary illnesses. Physical findings are totally unreliable in diagnosis. Only 29 per cent of the patients in this series had rales. Tubercle bacilli were found in 21 per cent of the cases. Concentrates and cultures—and ideally guinea pig inoculation—of sputum and fasting gastric contents are required for an adequate search for tubercle bacilli. The tuberculin test was little used in the diagnosis of these cases. X-ray examination was used for diagnosis in 94 per cent of the cases before admission. This is the only reliable method for early diagnosis of minimal tuberculosis. Films should be taken in every case with symptoms suggestive of tuberculosis, in any illness that may be tuberculosis and periodically in all contact cases. Routine x-ray examinations are required for the entire population.

New Orleans Medical and Surgical Journal

98:307-350 (Jan.) 1946

Carcinoma of Cervix: Attempted Follow-Up Study of 500 Cases: I. Analysis of Material. P. Graffagnino and Elizabeth M. McFetridge. —p. 307.

*Treatment of Carcinoma of Cervix at Charity Hospital: II. Analysis of 716 Cases; Three Year and Five Year End Results. M. Garcia and J. V. Schlosser.—p. 314.

Some Hazards of Anesthesia. J. Adriani.—p. 324.

Tuberculosis Survey in New Orleans. C. A. Stewart.—p. 330.

Report on Terminal Obstetric Anesthesia Using Low Spinal Block. A. L. Culpepper.—p. 335.

Treatment of Carcinoma of Cervix.—The study by Garcia and Schlosser is based on 716 unselected cases of carcinoma of the cervix admitted to the Charity Hospital of Louisiana at New Orleans in the four year period that ended March 31, 1942. The absolute three year survival rate for the entire group is 37 per cent. The absolute five year survival rate in a group of 329 cases seen through March 1940 is 28 per cent. X-ray therapy is an essential part of the treatment. Unless particularly favorable circumstances prevail, radium can be expected to control the disease only in the central zone of the pelvis. The two sources of radiation are mutually complementary, and they must be carefully integrated. X-ray therapy is administered first and is calculated to deliver a dose of 3,000 roentgens ± 15 per cent to the lateral edge of the parametria in a period of three weeks. This is followed in a few days by radium therapy, 6,600 roentgens being given to the paracervical region in five days, which requires an exposure of 6,500 to 8,500 milligram hours. The total duration of treatment is thirty to thirty-one days. The three dimensional distribution of the combined irradiation encompasses the main areas of involvement in a dosage range high enough to anticipate control of the disease in a substantial proportion of the cases. The authors conclude that radiation therapy remains the treatment of choice in carcinoma of the cervix in all stages of the disease.

Ohio State Medical Journal, Columbus

42:1-112 (Jan.) 1946

Increased Intracranial Pressure and General Practitioner's Responsibility. J. P. Evans.—p. 25.

Tantalum Cranioplasty. J. T. Bakody.—p. 29.

Progress and Stasis in Medicine: Perforation of Colon by Chicken Bone. W. M. Johnston.—p. 34.

Congenital Right Diaphragmatic Hernia with Autopsy Findings: Case Report. F. W. McDowell and J. M. Tondra.—p. 36.

Case of Perforative Diverticulitis of Colon in 27 Year Old Male. O. Eitzen.—p. 38.

Soil in Relation to Health. C. R. Orton.—p. 40.

Addison's Disease: Report of Case and Analysis of Autopsied Cases of Tuberculosis of Adrenal Glands. R. P. Hardwig and C. H. Wright. —p. 45.

Pennsylvania Medical Journal, Harrisburg

49:385-496 (Jan.) 1946

Penicillin in Obstetrics: Final Report. H. A. Power and C. A. Cravotta. —p. 401.

*Oral Penicillin. P. György, Katharine W. Evans, Elizabeth K. Rose, Josephine G. Perlingiero and W. F. Elias.—p. 409.

Induced Sensitivity from Topical Use of Sulfonamides and Penicillin. P. E. Bechet.—p. 417.

Convulsions in Infancy and Childhood. A. Capper.—p. 421.

Oral Penicillin.—György and his associates compared the blood levels of penicillin in children after ingestion of aqueous penicillin solution and of buffered penicillin (mixed with sodium citrate). Less irregular, higher and more prolonged blood levels were the rule after administration of buffered penicillin by mouth. In the search for other buffers aluminum hydrate gel was considered as a possible substitute for sodium citrate. The blood levels obtained were higher after ingestion of buffered penicillin than after the ingestion of capsules containing the penicillin-oil-beeswax mixture. Trisodium citrate seemed superior to aluminum hydrate gel. The blood levels obtained after the use of 15,000 units of penicillin given intramuscularly do not differ materially from those observed following the use of 40,000 units of penicillin buffered with trisodium citrate administered by mouth. Given in doses which were approximately three times higher than the customary parenteral doses, penicillin by mouth proved to be therapeutically effective in pneumonia, in upper respiratory infections and their complications, in gonorrhea and in pyogenic cutaneous infections. It appears inadvisable to supplant parenteral with oral penicillin indiscriminately. Parenteral administration still remains the method of choice, at least during the early acute phase, in very sick patients with septicemia or meningitis.

United States Naval Med. Bulletin, Washington, D. C.

46:1-168 (Jan.) 1946

Leukemia in Naval Personnel. B. L. Canaga Jr., D. A. Wood, L. H. Dyke Jr. and A. M. Snell.—p. 1.

Early Recognition and Treatment of Vascular Injuries. H. K. Gray, C. D. Benson, A. M. McDonald and H. D. Adams.—p. 14.

Symposium on Military Medicine Aboard U. S. S. Samaritan.

A. Early Treatment of Orthopedic Casualties on Hospital Ship. E. L. Jewett, J. F. Belair, H. Lohnaas and J. N. Hamm.—p. 25.

B. Covering Guillotined Stump. E. L. Jewett.—p. 37.

C. Anesthesia on Hospital Ship. R. W. Enos.—p. 40.

D. Medical Problems of Internist on Hospital Ship. W. P. Reed and H. B. Sweetser Jr.—p. 43.

E. Perforating Wounds of Kidney. E. M. Cannon.—p. 49.

F. Punctate Cerebral Hemorrhage Following Thoracic Trauma. H. Wood and H. B. Sweetser Jr.—p. 51.

G. Injuries of Face and Neck in War Casualties. H. J. Wiser and M. F. McAfee.—p. 57.

H. Eye Injuries in War Casualties Aboard Hospital Ship. H. J. Wiser.—p. 67.

I. Embarkation and Disembarkation of Hospital Ship Patients. R. B. Toller.—p. 73.

Pneumoroentgenarthrography as Diagnostic Aid in Internal Derangements of Knee. J. B. Butts and J. T. Mitchell.—p. 77.

Effect of Bite-Wing Roentgenograms on Navy Dental Examination Findings. J. M. Dunning and G. W. Ferguson.—p. 83.

Seventy-Eight Hundred Scarlet Fever Patients. J. C. McMillan Jr. —p. 89.

Convalescent Serum and Pooled Plasma in Communicable Diseases. A. C. Rambar.—p. 93.

Penicillin in Intrapleural Infection. J. Jacobson.—p. 97.

Virginia Medical Monthly, Richmond

73:1-44 (Jan.) 1946

Postwar Plans for Returning Medical Veterans.—p. 1.

Some Strange Tumors. W. L. Peple.—p. 4.

Postoperative Pneumonia and Atelectasis. M. L. White Jr.—p. 9.

Meckel's Diverticulum: 56 Cases. F. S. Johns and J. K. Wilson.—p. 17.

Hyperpnea Test for Latent Coronary Artery Disease: Preliminary Report. N. Bloom.—p. 21.

Control of Hemorrhage After Tonsillectomy: Use of Thrombin. F. H. McGovern.—p. 23.

Bacterial Endocarditis and Penicillin: Report of 2 Cases with Diabetes. W. R. Jordan.—p. 25.

Western J. Surg., Obst. & Gynecology, Portland, Ore.

53:413-456 (Dec.) 1945

Chronic Sclerosing Osteitis. H. W. Meyerding.—p. 413.

Fibular Bone Graft in Ununited Fractures of Neck of Femur. M. S. Henderson.—p. 422.

Mortality After Operation. E. R. Schmidt and O. V. Hibma.—p. 427.

Gastric Adenomas: Pathologic Study. J. H. Rieniets and A. C. Broders. —p. 433.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Industrial Medicine, London

2:183-252 (Oct.) 1945

Vesication and Some Vesicants M. W. Goldblatt.—p. 183.
Control of Hazards in Luminous Dial Painting Industry. J. C. Jones and M. J. Day.—p. 202.
Methyl Iodide Poisoning. A. Garland and F. E. Camps.—p. 209.
Solubility or Distribution Coefficient of Carbon Tetrachloride in Water, Whole Blood and Plasma. Joan F. Powell.—p. 212.
Incidence of Sepsis in Industrial Wounds. R. E. O. Williams and E. H. Capel.—p. 217.

Lancet, London

1:1-40 (Jan. 5) 1946

Prognosis and Patient. L. Cole.—p. 1.
Transmissible Disease in Rats: Inoculated with Malaria from Cases of Infective Hepatitis. F. O. MacCallum and J. A. R. Miles.—p. 3.
*Delimitation of Subcortical Tumors by Direct Electrography. W. G. Walter and V. J. Dovey.—p. 5.
*Schistosomiasis: Intensive Treatment with Antimony. W. Alves and D. M. Blair.—p. 9.
Treatment of Schistosomiasis. W. G. Mills.—p. 12.
Large Missile Lodged in Face with Minor Clinical Disturbance. T. Gibson.—p. 13.
Determination of Pathogenicity of Tubercle Bacilli by Their Intermediate Metabolism. J. Lehmann.—p. 14.

Delimitation of Subcortical Tumors by Electrography.—Walter and Dovey say that, often even after localization of a lesion by neurologic examination, electroencephalography and air replacement, exposure of the cortex may reveal nothing, and the surgeon must resort to needling of the subcortical tissue. To supplement this subjective method, a needle electrode has been made with which the electrical activity of the subcortical structures may be recorded. The needle is used by the surgeon like an ordinary brain needle, except that recordings are made at every centimeter of depth. Differences of consistency can of course still be appreciated. When the electrode enters a tumor, abscess, hematoma or a ventricle, electrical activity becomes minimal. It reappears when the electrode emerges on the far side of a lesion. Electrical exploration in three dimensions can be carried out to establish the limits of the abnormal or aneural zone. The method can be used to supplement conventional methods of identifying and locating subcortical tumors at operation. The presence of a space occupying lesion can be detected by its electrical inactivity. Normal cerebral white matter is identifiable by rhythmic electrical activity of the same type as that found in the cortex. White matter adjacent to a space occupying lesion displays slow delta activity similar to that seen in the cortex in the same condition. The spatial extent of a lesion and the zone indirectly affected by it may be delimited with satisfactory precision.

Intensive Antimony Treatment in Schistosomiasis.—The cases described by Alves and Blair involved men, mostly Africans, with either urinary or intestinal schistosomiasis. They were diagnosed by a cercarial antigen intradermal test. The dose of sodium antimonyl tartrate was 12 mg. per kilogram of body weight. It was found that the total dose could easily be administered in six injections, and these were given at 9 a. m., 12 noon and 3 p. m. on each of two successive days. Since it would be difficult to inject smoothly 2 cc. of fluid in five minutes the injection was made up to 10 cc. with a 5 per cent dextrose saline solution. A vein in the antecubital fossa was chosen and the needle inserted. It was found that the same vein and indeed the same puncture could be used for all six injections. As soon as withdrawal of blood has shown that the needle is in the vein, the exact time is noted and the injection is begun. With the piston moving steadily, the injection is given at the rate of 2 cc. or less per minute. A minimum time of five minutes is taken to complete the injection. This slow and steady injection of the drug is of fundamental importance in the success of the treatment. This multiple syringe technic using sodium antimonyl tartrate was used in 100 cases of schistosomiasis. Viable eggs were not found immediately after treatment or at two months and three months after treatment. In 53 cases followed up for two months the cercarial antigen skin test had become negative in all but 14 cases. Nine of the 14 skin test positive cases were observed for three months, and the test became negative in 6 cases in this period.

Practitioner, London

156:1-80 (Jan.) 1946

Scope of Neurosurgery H. Cairns.—p. 2.
Modern Views on Etiology and Treatment of Acute Anterior Poliomyelitis. P. Cloake.—p. 10.
Peripheral Neuritis: Polyneuritis, Multiple Symmetrical Peripheral Neuritis. F. M. R. Walshe.—p. 19.
Modern Views on Concussion. F. R. Ferguson and L. A. Liversedge.—p. 26.
Subarachnoid Hemorrhage. J. St. C. Elkington.—p. 33.
Acute Respiratory Catarrhs. W. D. D. Small.—p. 40.
Posture. A. B. Appleton.—p. 48.
Pregnancy and Tuberculosis. Josephine Barnes.—p. 56.
Names of New Drugs. P. Hamill.—p. 61.
Early Recognition of Disease: I. Heart Disease. C. Bramwell.—p. 65.

Quarterly Journal of Medicine, Oxford

14:183-230 (Oct.) 1945

*Therapeutic Trial of Penicillin in Infective Conditions of the Skin. J. W. T. Davies, K. Dixon and C. H. Stuart-Harris.—p. 183.
*Nicotinic Acid Content of Blood in Health and Disease. C. W. Carter and J. R. P. O'Brien.—p. 197.
Hereditary and Familial Aspects of Exophthalmic Goiter and Nodular Goiter. L. Martin.—p. 207.

Penicillin in Infections of Skin.—Davies and his associates investigated the efficacy of treatment of pyoderma with penicillin as compared with other remedies. Penicillin was in most cases applied as an aqueous spray containing 1,000 Oxford units per cubic centimeter. In one group of patients penicillin spray was administered to the lesions on one side of the body, and the results were compared with those of other remedies applied to the lesions on the opposite side. In a second group of patients all the lesions were sprayed with penicillin and the results compared with a control group receiving other forms of treatment. Lastly, a small group of patients received large doses of penicillin by intramuscular injection (400,000 Oxford units daily). Only in annular (staphylococcic) impetigo was penicillin greatly superior to other remedies. Cases of this disease were few. In seborrheic dermatitis, which was the main type of pyoderma treated, penicillin was not more effective than other remedies. In ecthyma, penicillin compared unfavorably with other remedies. The exudate obtained from the lesions was examined bacteriologically before, during and after treatment. Culture resulted in the isolation of staphylococci or hemolytic streptococci or both in 99.5 per cent of the 200 cases examined. All strains of streptococci (isolated from 97 cases) and the vast majority of the staphylococci (in 182 out of 197 cases) originally isolated from the lesions were sensitive to penicillin. Success or failure of therapy could not be correlated with the flora isolated. In spite of treatment penicillin sensitive organisms were usually recovered from the lesions after three days of treatment. In some cases penicillin resistant staphylococci appeared during treatment, and this phenomenon increased in frequency as treatment was prolonged. The presence of penicillin resistant strains of staphylococci was not the cause of resistance to penicillin treatment, since in many refractory cases sensitive staphylococci were recovered after prolonged spraying as well as after intramuscular therapy. All strains of hemolytic streptococci isolated from the lesions both before and after penicillin treatment were sensitive to penicillin.

Nicotinic Acid Content of Blood.—Carter and O'Brien determined the concentration of nicotinic acid in the blood of 60 persons who appeared to be in normal health. The mean level for whole blood was 438 micrograms per hundred cubic centimeters. The normal range lies within the limits 260 to 573 micrograms per hundred cubic centimeters of blood. Repeated determinations have been made over a period of twenty-six weeks in 2 subjects. It was found that the blood concentration of nicotinic acid is constant over a period of time but is temporarily increased after the administration of large

doses of nicotinamide. Prolonged administration of nicotinic acid appears to lead to the attainment of a degree of saturation in the blood which is limited by the ability of the blood cells to fix nicotinic acid as coenzymes. The nicotinic acid concentration in the blood in a variety of pathologic conditions does not greatly differ from normal values. Hyperthyroidism and sprue may be associated with low values. Myeloid leukemia with a high polymorphonuclear count is associated with high nicotinic acid values. Pernicious anemia may give low values, whereas in hypochromic anemia normal values are observed. It is concluded that the concentration of nicotinic acid in the blood does not provide a useful nutritional index.

Medical Journal of Australia, Sydney

2:385-416 (Dec. 8) 1945

Natural Bacterial Agglutinins in Child's Serum. F. Draper.—p. 385.
Amebiasis in New Guinea, 1943-1944. B. Hall and J. J. Billings.—p. 393.

Revue Belge des Sciences Médicales, Louvain

16:221-300 (July) 1945

Intra-Auricular Temperature and Thermic Criterion of Physicopyrexia. A. Bessemans, P. Wittebolle and Late A. Gelens.—p. 221.
*Streptococcic Antifibrinolysin. M. Graffar.—p. 230.
Conditions in Which Arterial Hypertension Returned to Normal: Part Played by Central Nervous System. A. van Bogaert and F. van Baarle.—p. 242.
Influence of Sex on Untoward Reactions from Blood Transfusions. W. de Weerdt.—p. 254.
Untoward Reactions from Blood Transfusions. P. Moureau.—p. 258.

Streptococcic Antifibrinolysin.—Graffar found that the plasma clot in 55 of 58 normal adults was dissolved by cultures of streptococci in less than thirty minutes. The plasma clot in 17 of 26 adult patients convalescing from acute hemolytic streptococcus infections was resistant to the solving effect of cultures of streptococci. This resistance is attributable to the presence of a specific antifibrinolysin. The plasma clot of 15 patients with pneumonia, bronchopneumonia, tuberculosis of the lungs or typhoid was dissolved in less than thirty minutes. The plasma clot of 2 patients with Osler's endocarditis showed a moderate resistance to fibrinolysis. This may be attributed to the rheumatic disease and to the hemolytic streptococcus infection which preceded it rather than to the secondary infection with Streptococcus viridans. Serum of normal persons manifested a moderate but measurable antifibrinolytic activity. Neutralization of the fibrinolysin by the serum is to be considered as a quantitative reaction. The antifibrinolysin of the serum deteriorates when submitted to high temperatures. The antifibrinolysin was destroyed by an exposure to a temperature of 75 C. for one hour. The plasma clot in 14 of 24 newborn babies was resistant to streptococcic fibrinolysis. The level of the antifibrinolysin in the serum of the newborn was close to the level of the serum of the mother. A relationship was not demonstrated between the degree of resistance to fibrinolysis of the plasma clot of the newborn and the antifibrinolytic activity of its serum. The factor which produces the resistance to fibrinolysis in the newborn is therefore not the specific antifibrinolysin, and its nature has not been determined.

Ophthalmologica, Basel

110:1-112 (July-Aug.) 1945

Aberrant Fibers of Fasciculus Opticus. G. T. Hultquist.—p. 1.
Retraction Nystagmus in Encephalitis Due to Brucella Abortus Infection. M. Heim.—p. 15.
Measurement of High Refraction Values in Keratokonus. M. Amsler and O. Klauser.—p. 29.
New Instruments for Keratoplasty. M. Girardet.—p. 34.
*Successful Treatment of Sjögren's Syndrome with Methyl Testosterone. R. Brückner.—p. 37.
Physiologic Angioscotomas. R. Weekers and M. Humblet.—p. 43.
Primary Familial Lenticular Dysplasia. M. Gruber.—p. 60.

Methyl Testosterone in Treatment of Sjögren's Syndrome.—Brückner reports the history of a woman aged 47 who presented Sjögren's syndrome. She had been troubled with keratitis, dryness of the conjunctiva, foreign body sensation in the eyes, burning sensations in the tongue, pharynx and vulva, a cold and dead sensation and lancinating pains in the fingers, cramps in the joints of the feet and dryness in the mouth and nose. Since the woman was in the menopausal age, incretory disturbances were suspected. She was given daily one or two tablets containing 5 mg. of methyl testosterone by lingual administration. The tablet was not swallowed but had to be absorbed by the oral mucous membrane. This medication has suppressed the keratoconjunctivitis sicca as well as the other symptoms of the syndrome for eighteen months. If the medication is interrupted for more than a week, the symptoms recur.

Medicina, Madrid

13:311-383 (Nov.) 1945. **Partial Index**

*Penicillin in Anthrax. E. Alvarez Sainz de Aja.—p. 345.

Penicillin in Anthrax.—Alvarez Sainz de Aja reports good results in 3 out of 4 cases of anthrax from perifocal injections of penicillin or local application of the drug together with intramuscular injections. He placed the perifocal injections at four points of the anthrax lesion without incising it. Failure of the treatment in 1 case occurred when penicillin was given late in the course of the disease.

Nordisk Medicin, Gothenburg

25:505-678 (March 23) 1945. **Partial Index**

Hygiea

*Question of Thromboembolism: Summary of Twenty Years' Experience. S. Johansson and S. Holmdahl.—p. 524.
12,000 Cases of Evipal Anesthesia: Experimentation and Experiences. A. Westerborn.—p. 528.
New Simple Method of Treatment of Recurrent Luxation of Shoulder Joint. Helge Camitz.—p. 531.
Treatment of Wounded Finlanders in Surgical Division I of Sahlgren Hospital, 1942-1944. T. Sahlström.—p. 532.
*Experiences Regarding Value of Citric Acid and Phosphatase Tests for Surgical Indication. A. Westerborn.—p. 567.
Recent Experiences Regarding Value of Citric Acid, Phosphatase and Bilirubin Analyses in Differential Diagnosis in Diseases of Liver-Biliary Ducts. J. Lehmann.—p. 572.
*Nonhemolytic Forms of Jaundice with Negative Direct van den Bergh Reaction. G. Welin.—p. 575.
Contribution to Question of Inoculation Hepatitis. M. Odin.—p. 581.
Subacute Temporal Periphlebitis. S. Eckerström.—p. 585.
Facial Pareses. B. Ewert.—p. 586.
Results of Treatment of Pneumonia During Last Six Years. G. Fänge. p. 588.
Is Prophylactic Vitamin K Treatment of Newborn Necessary? A. Wallgren.—p. 606.
Pathogenesis of Hyperpyretic Forms of Malignant Syndrome. Y. Åkerrén.—p. 608.
Residual Cavities After Thoracoplasty. L. Blecher.—p. 626.
Movement of Mitral Ring During Heart Action: Kinetographic X-Ray Study. H. Odqvist.—p. 627.
Experiences from One Year's Fluorographic Examination of Personnel of Swedish Ball Bearing Factory, Gothenburg. S. Langert and G. Runström.—p. 630.

Thromboembolism.—Johansson and Holmdahl conclude that postoperatively early rising and early exercise are at present the only practical measures for the prevention of thromboembolism. Prophylaxis with heparin or dicumarol is still in the experimental stage. Dicumarol is recommended in treatment of manifest thrombosis. In manifest pulmonary embolism, eupaverin, eventually in combination with heparin, is the sovereign agent.

Citric Acid and Phosphatase Tests in Surgical Indications.—Citric acid and phosphatase analyses were made in 200 cases of gallstones and in diseases of the biliary tract. Westerborn finds them valuable adjuncts to the clinical examination in differential diagnosis of hepatitis and mechanical obstruction but not decisive for diagnosis or as indications for surgery. In uncomplicated cases of inflammation or calculi in the gallbladder the tests do not give satisfactory information.

Nonhemolytic Jaundice with Negative Direct van den Bergh Reaction.—Welin states that mild or latent jaundice, intermittent or chronic, with this reaction is relatively common without signs of disturbance in hemopoiesis or chronic indurative liver processes. Hyperbilirubinemia of this kind can occur (1) as a constitutional inadequacy, (2) in ulcers, (3) in other gastrointestinal disorders or (4) as a residue of acute hepatitis. It seems to be a sign of a liver disturbance revealed mainly by reduced ability to eliminate bilirubin, and also by hypercitricemia. Its benign character has been verified by liver biopsies.

Book Notices

Pulmonary Edema and Inflammation: An Analysis of Processes Involved in the Formation and Removal of Pulmonary Transudates and Exudates. By Cecil K. Drinker, M.D., D.Sc., Professor of Physiology, School of Public Health, Harvard University, Boston, Mass. The Nathalie Gray Bernard Lectures delivered at the Bowman Gray School of Medicine, Wake Forest College, Winston-Salem, North Carolina, in December 1944, together with a fifth chapter on Artificial Respiration. Harvard University Monographs in Medicine and Public Health [Number 7]. Cloth. Price, $2.50. Pp. 106, with 27 illustrations. Cambridge, Mass.: Harvard University Press; London: Oxford University Press, 1945.

This small monograph is based on a series of lectures describing experimental studies on pulmonary physiology carried out by the author and his associates. However, the bedside application of the findings is stressed with an insight undoubtedly based on Drinker's early clinical training and obvious interest in practical problems. Most of the physiologic studies deal with the influence of various factors on lymph drainage from the lung of the anesthetized dog. It is pointed out that the normal exit of lymph drainage from the lung is quite inadequate, forming a veritable bottle neck, which is often unable to keep pace in terms of removal with a reasonably steady and rapid production of excess tissue fluid. This is one reason why the pulmonary capillaries possess such a distinct vulnerability to edema. Another reason deals with the fact that exudation obviously blocks the entrance of air to the alveoli, which impairs aeration and leads to anoxia. Anoxia itself is a primary cause for increased permeability of pulmonary capillaries; in other words, anoxia begets anoxia, thus forming a vicious circle.

The beneficial influence of respiratory movements on lymph flow is emphasized and exemplified clinically by the deleterious effect of shallow breathing. Deep respirations not only promote lymph flow but clear the finer bronchioles and stimulate the normal respiratory reflex. In this way aeration is increased and the tendency toward anoxia diminished. An added factor is the erect position, which increases vital capacity and thus justifies the present trend toward early ambulation after operation. The physiologic importance of movement is expressed in the statement "Man is never absolutely sure to remain still physically for any length of time unless he is anesthetized or dead."

In a detailed discussion on the therapeutic use of oxygen the obvious but often overlooked point is made that such therapy is clearly ineffective unless the gas reaches the alveoli; in other words, unless something is first done to clear the air passages. More important is the emphasis placed on the early use of oxygen before extensive obstruction has occurred. Morphine, because of its depressant action, should not be given a dyspneic patient unless he is at least in an oxygen tent.

The last portion of the monograph is devoted to a discussion of artificial respiration. The efficacy of simple methods is emphasized. Mouth to mouth insufflation for acute cessation of respiration can always be used at once, thus saving precious time, which is important, as the chances of recovery fall rapidly after the passage of three or four minutes of complete apnea. Simple insufflation, which distends the alveoli, stimulates the normal respiratory reflex and is probably the reason why this method is so effective in most cases. The same stimulus can be obtained with an ordinary simple gas mask as used by anesthetists. These considerations are emphasized by the author at some length, in contrast to the inapplicability and even danger of the various appliances which are recommended for starting respirations which have suddenly ceased. A distinction must be made here, however, in the case of artificial respiration as a substitute for normal breathing in cases of various types of paralysis. This presents quite another problem and the advantages of the Eve procedure, which provides alternate suction and compression on the lungs through the diaphragm by means of a tilting device, are described and the method recommended. For this purpose other types of mechanical respirators are of obvious utility. On the other hand, Drinker underscores his objections to certain machines for the emergency treatment of sudden cessation of respiration as follows: "The medical profession has for years had incessant sales onslaughts of ingenious mechanical engineers who have devised appliances which are enormously attractive mechanically, very expensive, and little regardful of physiological or pathological consequences."

Although a few of the statements made in this monograph may arouse disagreement, it will be read with considerable interest by all those concerned with pulmonary physiology and with the many clinical details in the bedside care of patients with pulmonary disease. It should prove of practical value as a provocative source of information and as a stimulus to the thinking of all practitioners confronted with the problem of treating pulmonary edema.

Facial and Body Prosthesis. By Carl Dame Clarke, Ph.D., Associate Professor of Art as Applied to Medicine, School of Medicine, University of Maryland, Baltimore. Cloth. Price, $5. Pp. 200, with 75 illustrations. St. Louis: C. V. Mosby Company, 1945.

For those who are interested in prosthesis, this book will undoubtedly be a useful guide. It is one of three books published in this country on the subject, all three of which appeared in 1945. No doubt the war was an added impetus for the publication of these books.

The author in the first chapter discusses prosthesis (moulage prosthesis) in general. He defines its advantages and limitations as compared with plastic surgery and points out where such restorations are most useful. This chapter includes references to some of the most useful materials for reconstruction of noses and ears, such as latex and plastics, with mention of some of the older materials not in use, such as metals and gelatin-glycerin compounds. Chapters II, III, IV and V deal with materials used in the technic of molding and casting, all of which are indirectly related to the problem of prosthesis. Chapter III, on wax molds, appears to be mislabeled, since only the first page out of thirty-three contained in the chapter deals with the subject of wax molds. Chapter VII, on the control of expansion and contraction of rubber casts, contains interesting data on experiments conducted to find means of compensating for the shrinkage of the final prosthesis.

The book contains valuable information regarding the technic of making full facial casts with various types of impression materials. The technic of taking impressions of the head and face with hydrocolloid materials is given in detail. The problem of making prosthetic hands with latex compound is given considerable space, and some of the technical suggestions made should prove valuable for those who are interested in this difficult prosthetic problem. The author's discussion on coloring of the latex prosthetic restoration is useful. He sets forth the basic problems that are encountered in obtaining lifelike skin color and offers methods of accomplishing this. A selected list of pigments and solvents for these pigments is given. The chapter on restoration of cranial defects deals with one method of filling in such defects, namely the preformed bone chip method. The technic of making a suitable mold in which bone chips may be molded to the desired contour before they are inserted under the skin by the surgeon is explained. The chapter on the use of elastic or rubber-like plastic is necessarily short, since use of the material is still in its experimental stage. A fairly complete bibliography is given at the end of each chapter, and the illustrations are clear.

Physical Treatment by Movement, Manipulation and Massage. By James B. Mennell, M.A., M.D., B.C. Fifth edition. Fabrikoid. Price, $7. Pp. 512, with 288 illustrations. Philadelphia: Blakiston Company, 1945.

A considerable number of alterations have been made in this edition. The illustrations are excellent, new ones have been added, and old ones have been omitted. Numerous alterations have been made in the text; for example, the author gives a summary of the treatment of infantile paralysis with physical medicine. Mennell states that the views expressed in these pages are founded on the result of many years of close observation, study and experiment. He modestly continues "It is possible some of my deductious are erroneous, but at least they are capable of being argued and are not merely arbitary." His chapters on massage show the outcome of the actual experience of a medical man who has really studied massage in theory and practice. His classification of the massage movements and his principles have generally been accepted by the Council on Physical Medicine of the American Medical Association. There are a number of chapters on the treatment of recent injuries by mobilization and massage which should interest those treating these injuries as well as the chapters on the treatment of the after-effects of injury, the reeducation of muscle and reeducation

in walking. The chapters on backache, excellently illustrated, are taken from the author's monograph "Backache." These chapters give many points on examination and manipulations for backache. The author says that many of the views herein expressed are unorthodox, and many of the views on backache may fit into this class but they should be read and tried by those interested in physical medicine. The volume contains much valuable information and should be available to all physicians interested in physical medicine.

Libro azul médico mexicano, 1945-46. Paper. Price, $6; 30 pesos. Pp. 279. Mexico. D. F., 1945.

After several years in preparation, the first edition of a Mexican "Medical Blue Book" has been issued, containing information on about 1,300 physicians throughout the country and about 275 dentists in Mexico City and Guadalajara. The director of the publication states that all data in the book have been supplied by the physicians and dentists themselves without incurring any obligation whatever on their part, and that all claims as to graduation and licensure have been verified. The directory is arranged geographically by state, city and surname. The information given on each physician or dentist may include his home and office address, telephone numbers, medical school and year of graduation, registration number, specialty, an indication that he has x-ray equipment, his nationality, place and date of birth, foreign languages spoken and special honors conferred on him, such as faculty and civil appointments and memberships in national and special medical societies. Of considerable help to many users of the directory should be the device of printing each surname in capital letters to distinguish it from other parts of the full name and thus minimize the difficulty of correctly addressing those whose names are combinations of the paternal and maternal surnames. The publisher stresses the fact that the work is necessarily incomplete, as only persons whose medical education could be verified have been included in the first edition, and he pledges that "the work will continue and improve as time goes on." It is hoped that future editions will improve to the extent of including an alphabetical index of the physicians and dentists listed. This index should distinguish between physicians and dentists and indicate the state and city in which they are located, so that information on members of the medical profession in Mexico can be easily located even when only their names are known. The value of the book for reference purposes is also somewhat diminished because of the omission of a table of contents, which is needed to make the information more readily accessible, especially in view of the fact that the book does not have adequate headings on each page to guide the reader. As the scope of future editions enlarges, the addition of information on medical schools and hospitals recognized by the profession would also be of assistance to users of the Mexican "Medical Blue Book."

Physical Chemistry of Cells and Tissues. By Rudolf Höber, University of Pennsylvania School of Medicine, Philadelphia, Pa. With the collaboration of David I. Hitchcock, Yale University School of Medicine, Laboratory of Physiology, New Haven, Conn., J. B. Bateman, Mayo Clinic, Rochester, Minn., David R. Goddard, University of Rochester, Biological Laboratories, Rochester, N. Y., and Wallace O. Fenn, University of Rochester School of Medicine and Dentistry, Rochester, N. Y. Fabrikoid. Price, $9. Pp. 676, with 70 illustrations. Philadelphia & Toronto: Blakiston Company, 1945.

The application of physical and physicochemical principles and methods to the study of biologic problems has resulted in many valuable contributions to our understanding of the complex relationships that exist in living cells. In spite of this fact, however, progress has been relatively slow and our knowledge of this field is still fragmentary. One reason for this slow rate of advance is probably the fact that too few of the older investigators are sufficiently well trained in mathematics, physics, chemistry, physical chemistry and biology to plan and carry out significant work in this borderline field. And yet such work will have to be done, in increasing amounts, before we may expect really to understand the complex chemical and physical reactions that take place in living protoplasm. For these reasons the publication of a book like this one by Höber and his collaborators is significant for the future of cellular physiology. By summarizing our knowledge of the physicochemical reactions of living cells it not only calls attention to the advances which have already been made in this field but also serves to suggest, to the careful and critical reader, further lines of investigation which may prove fruitful in the future. Above all, books of this character, by indicating the great possibilities in this field, should stimulate students to master the necessary fundamental sciences so that not only may they be better equipped to read and understand work of this kind but that they may themselves be in a position to do creative work in this highly important field.

This book is divided into eight sections, containing thirty-eight chapters. Section 1, by David I. Hitchcock, deals with selected principles of physical chemistry and includes chapters on diffusion in liquids, reaction velocity and enzyme action, thermodynamics, electromotive force and some properties of aqueous solutions. Section 2, by J. B. Bateman, deals with the physicochemical properties of large molecules and their architectural and functional significance in living matter. Sections 3, 4 and 5, by Rudolf Höber, are concerned with the architecture of protoplasm, the structure and properties of cell surfaces and the influence of some extracellular factors on cellular activity. Section 6, by David R. Goddard, discusses the respiration of cells and tissues. In section 7 Wallace O. Fenn discusses contractility, including a general survey of contractile tissues and of muscles. Finally section 8, by Höber, deals with passive penetration and active transfer in animal and plant tissues and includes chapters on such subjects as intestinal absorption, formation of urine and elaboration of digestive juices. This mere listing of section headings is by itself inadequate so far as indicating the wide variety and scope of the subjects treated in this book is concerned. This is not a book to be read casually, especially by one who does not have the necessary mathematical and physicochemical background. It is a book which, studied carefully, will prove stimulating to students of biology and medicine interested in gaining a better understanding of the structure and properties of living protoplasm and of the complex chemical and physicochemical reactions which help to endow living protoplasm with its unique properties.

The Osseous System: A Handbook of Roentgen Diagnosis. By Vincent W. Archer, M.D., Professor of Roentgenology, University of Virginia Department of Medicine, Charlottesville, Va. Cloth. Price $5.50. Pp. 320, with 148 plates. Chicago: Year Book Publishers, Inc., 1945.

This book recognizes the need for adequate training and experience in radiology before attempting diagnosis by x-ray, but it will be found helpful by practitioners whose work is not confined to that specialty. The book covers examination of the bones for fracture and disease and constantly refers to the normal structures and variations. A new departure is the presentation of diseases of the bone under the pathologic findings instead of under the conventional headings. This appears to be a more direct approach from x-ray examination to diagnosis. The illustrations are carefully correlated with the subject matter and clearly labeled for quick interpretation. The x-ray reproductions are of exceptionally fine quality. Hints and criteria are given for judging the quality of films and for a clear and logical approach to diagnosis. A systematic method for routine examination is presented. Timely warnings of pitfalls to be avoided by the diagnostician are given. This book should be helpful to both the general practitioner and the radiologist.

Doctor! Do Tell! Interesting and Entertaining Human Interest Episodes Which Forty Odd Years in the Field of Medicine and Surgery Have Disclosed. By Dr. Victor F. Marshall. Fabrikoid. Price, $2.50. Pp. 235, with 6 page plates. Appleton, Wisconsin: C. C. Nelson Publishing Company, 1945.

The story of a life is always interesting, especially the story of a long life devoted to serving the sick. That is what Dr. Marshall's autobiography represents. Childhood, medical school and active surgical practice in a Wisconsin town are related in brief sketches, with emphasis on human interest and with a generous admixture of subdued humor. The development of medicine of the last forty-five years is portrayed here as reflected in the practice of a busy surgeon, including sulfonamides and the Rh factor. Some day historians will find in books like this a true picture of medical practice of the period it represents.

Queries and Minor Notes

THE ANSWERS HERE PUBLISHED HAVE BEEN PREPARED BY COMPETENT AUTHORITIES. THEY DO NOT, HOWEVER, REPRESENT THE OPINIONS OF ANY OFFICIAL BODIES UNLESS SPECIFICALLY STATED IN THE REPLY. ANONYMOUS COMMUNICATIONS AND QUERIES ON POSTAL CARDS WILL NOT BE NOTICED. EVERY LETTER MUST CONTAIN THE WRITER'S NAME AND ADDRESS, BUT THESE WILL BE OMITTED ON REQUEST.

ALTITUDE AND HEART DISEASE

To the Editor:—**The wife of a friend of mine who lives in the central part of Mexico (about 6,000 feet above sea level) has been suffering from some sort of heart trouble and has been advised to move to a lower altitude, as it actually has been found that when she comes down to this city, the altitude of which is about 2,000 feet, she really feels better. Would it be possible to improve conditions by constructing a pressure room in order to equalize the barometric pressure by actually pumping air into the patient's room at least during the night hours? It would be necessary, of course, to provide for an outlet for the air that has been let in small enough to maintain the desired pressure. Do you think this experiment would be worth while trying?** F. Vela-Gonzalez, M.D., Monterrey, N. L., Mexico.

ANSWER.—The barometric pressure at 6,000 feet is approximately 609 mm. of mercury, and the calculated oxygen tension in the alveoli is around 75 mm. of mercury. Although it might seem that the fall in the alveolar oxygen tension from the normal of 104 or 105 at sea level to around 75 at 6,000 feet is considerable yet this is responsible for only a slight lowering of arterial oxygen saturation. This is clearly shown by a glance at the oxyhemoglobin dissociation curve of arterial blood; the upper part of the curve tends to flatten out so that at tensions of 75 mm. of mercury the arterial blood may still be 92 to 93 per cent saturated as compared with the normal of around 96 per cent.

Most people with heart disease while at rest do not have a significant lowering of the arterial oxygen saturation; hence a change from sea level to 6,000 feet or the reverse should not be important except during activity. It probably would not be worth while to pressurize the patient's room because in all likelihood little or nothing would be gained. Even assuming that an increase in alveolar oxygen tension is desirable, it would be simpler and far more economical to increase the percentage of oxygen in the inspired air. It should also be emphasized that variables other than barometric pressure might account for the patient's greater feeling of well-being at the lower altitude.

PERSISTING FISTULA AFTER APPENDECTOMY

To the Editor:—**A Mexican woman aged 28 had an appendectomy one year ago. She has had a draining abdominal sinus ever since. Smears and culture reveal only Staphylococcus aureus. There is no fecal odor. X-ray examinations of chest and bones are negative for any bony pathologic changes. Chest x-ray examination reveals an old calcified inactive tuberculosis. Neoiopax solution injected through the sinus into the abdomen followed by x-ray examination reveals dye in the intestinal tract. For treatment the patient received 1 million units of penicillin intramuscularly every three hours without effect; that is, 20,000 units every three hours. Staphylococcus vaccine did not help. Local penicillin irrigations have not helped. Her physical condition is good except for a mild secondary anemia. Occasionally she will have a mild fever when drainage slows down. I would appreciate knowing the next step to take; if surgical, would you leave a drain in until the patient is completely well? Would you use the cautery? Is there any treatment besides surgery?**

Arthur L. Henrichsen, M.D., Van Nuys, Calif.

ANSWER.—"A persisting sinus or fecal fistula following appendectomy for acute appendicitis is due to an ulcerative or granulomatous lesion of the region, an abscess cavity, gangrene, constriction of the intestine below the fistula or a foreign body. Fistulas resulting simply from the pressure of drains, misplaced sutures, the nicking of the intestine, inversion of the appendical stump or failure to invert it generally heal spontaneously. Persistence of the fistula is evidence of an inherent lesion of the intestinal wall or a microscopic or a macroscopic foreign substance" (Lichtman, A. L., and McDonald, John R.: *Surg., Gynec. & Obst.* **78**:449 [May] 1944). These foreign bodies include suture material, cotton fibers, talc, petrolatum or lycopodium. Cases have also been described in which adult Ascaris lumbricoides, the ova of Tenia saginata, Endameba histolytica and Actinomyces fungoides were thought to play a part in the formation of fistulas. In cases in which the external opening is small, sinus tracts infected with Escherichia coli can simulate the fecal discharge and can be easily confused with a suppurative saccular fecal fistula in which an abscess cavity is interposed between the internal and the external opening and which discharges fecal or purulent material intermittently.

Spontaneous healing of most postoperative fecal fistulas will occur unless there is a foreign body in the tract, in which event operative removal is essential to a cure (Deaver, J. B.: *Am. Surg.* **83**:782 [June] 1926. Ray, B. S.: *New York State J. Med.* **38**:412 [March 15] 1938). Some authors have reported spontaneous closure of fistulas as long as seven years after their appearance.

In cases requiring surgical treatment the following procedures are to be considered (Lichtman, A. L., and McDonald, J. R.: *Surg., Gynec. & Obst.* **78**:449 [May] 1944):

1. Extraperitoneal curettage and packing, indicated when a foreign body is suspected and when a little freshening in an epithelial lined tract will promote granulations and closing.

2. Simple extraperitoneal closure. In this procedure the skin around the stoma is freed and the walls of the fistula are dissected away from the abdominal wall. The dissection is carried down to the peritoneum, which is pushed back so that the fistula can be clamped and excised with the knife or cautery. The fistula is excised with a longitudinal incision in the intestinal wall. The mucosa of the intestine is then inverted in a transverse direction with two or three rows of sutures. Five Gm. of sulfathiazole may then be dusted into the area, and the abdominal wall is then closed in layers. A drain may be placed down to the fascia. This method is useful when the fistula is small and thin and the internal opening is small.

3. Intraperitoneal procedures, which include simple repair with excision of the fistula, simple repair with plastic operation on the intestine, side to side anastomosis with or without excision of the fistula, extraperitoneal resection, colostomy or ileostomy. Usually simple tubular fistulas after appendectomy yield good results with simple intraperitoneal closures. Fistulas originating in granulomatous lesions of the ileum, cecum or colon require resection. Greater safety and a cleaner surgical procedure can be secured by the preliminary performance of ileostomy or colostomy in large fecal fistulas.

The choice of a procedure will depend on an accurate preoperative diagnosis of the course and the extent of the fistula and on the findings at the time of operation.

CHRONIC MERCURIALISM

To the Editor:—**A patient states that she received mercury poisoning four years ago from inhaling mercury fumes while melting amalgam dental fillings. Would this cause enlargement of the spleen sufficient to give aching in the left upper quadrant? At the present time the spleen shows only a slight enlargement by x-ray.** M.D., Georgia.

ANSWER.—Chronic mercurialism is characterized by fine intention tremor, psychic irritability of an exaggerated degree, dermographia, excessive perspiration and abnormal readiness to blush, exaggerated tendon reflexes, pallor and certain abnormalities of the mouth. Mercury is eliminated in the urine, feces, saliva, sweat, bile and milk. The greater number of authors tend to localize the central nervous system disturbances in the nuclei of the base of the brain; the cerebral cortex also may be affected. Mercury is stored principally in the kidneys, liver, spleen and bones. In the examination of 59 cases of chronic mercurialism in the felt hat industry by Neal and others (Mercurialism and Its Control in the Felt Hat Industry, Public Health Bulletin 263, 1941) and 43 cases of chronic mercurialism in the fur cutting industry (A Study of Chronic Mercurialism in the Hatters' Fur Cutting Industry, Public Health Bulletin 234, 1937), no cases of enlargement of the spleen were found. Therefore it is probable that the enlargement of the spleen in this case, four years after the occurrence of mercury poisoning, is not due to chronic mercurialism.

OVARIAN CYSTS

To the Editor:—**It appears to be the custom in our local clinic, during any routine laparotomy, to inspect the ovaries and to puncture with a needle or the point of a scalpel any translucent area, allowing a small amount of yellowish looking fluid to escape. These pockets of fluid on the ovaries are called cysts. Could you discuss the etiology and pathology of these pockets of fluid?** M.D., Utah.

ANSWER.—The majority of the cysts referred to are atretic follicles in various stages of degeneration. Only one out of every hundred follicles develops in the normal manner and goes on to form a typical corpus luteum cyst. The remainder become corpora atretica, and during the process of involution varying amounts of yellow or clear fluid often collect. This fluid possesses estrogenic activity. On section these so-called cysts are lined with theca interna cells, which may be more or less flattened according to the amount of fluid contained. It is the current conception that the formation of these small cysts is a normal one and that puncturing them is not of value. If, however, they are large enough to necessitate removal, excision rather than incision is the method of choice.

UNILATERAL MYDRIASIS

To the Editor:—A man aged 25 had an injury to his left eye seven weeks ago. A small particle of metal was removed from his cornea, and homatropine 5 per cent was used afterward to dilate the pupil. He recovered from his injury, but the pupil remains dilated. Pilocarpine 1 per cent and physostigmine 0.5 per cent will not pull the pupil back to its normal size permanently. The vision is good for far and near in the affected eye. The eye is normal in all other respects. Five years ago both pupils were dilated for refraction and were normal afterward in proper time. The right pupil measures 2 mm. and the left 5 mm. The fundus is normal. The particle removed from the eye was too small to injure the lens. What can be done to bring this pupil back to normal?

S. A. Kleger, M.D., Astoria, Ore.

ANSWER.—An injury sufficient to produce unilateral mydriasis and no paralysis of accommodation must be more severe than in the case described. It must lead to a rupture of the sphincter pupillae or a paralysis of pupillary action because of damage to the nerve endings in the iris. Rarely an intraorbital traumatic lesion that will irritate the ciliary ganglion is encountered. It is more likely that in the case described the dilated pupil is the result of some condition other than that of injury, and one must think of irritation of the cervical sympathetic nerve on the affected side. Such an irritation can be produced by a tuberculous lesion in the apex of the lung or a tumor or scar tissue in the neck that would incarcerate or at least irritate the cervical sympathetic nerve. When the irritation is removed, the pupil will generally return to normal size. It is suggested that a weak solution of pilocarpine nitrate 0.5 per cent used twice a day will be sufficient to keep the pupil reasonably small. However, a thorough investigation should be made of the patient's general condition to determine the cause of the dilated pupil other than the foreign body of the cornea, which was trivial.

CHARTS FOR MAPPING SENSATION

To the Editor:—Will you tell me where I can obtain "sensory charts" to be used in charting sensory disturbances in neurologic disorders?

S. A. W., M.D., Salt Lake City.

ANSWER.—Most of the charts commonly available are quite inaccurate. Many of these are available in the various textbooks of neurology. The most accurate studies of the areas of skin innervated by the various spinal roots and segments have been made by Foerster. An excellent diagrammatic presentation of his findings has been prepared by Lewis. These observations roughly parallel those of Head made several years earlier. Both Head's charts and Lewis's chart after Foerster have been reproduced by Fulton. For the most accurate sensory charts it would be best to have new charts prepared from these. However, charts prepared from the older diagrams can be obtained from the Physicians Record Company of Chicago and doubtless from other publishers of medical forms.

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INFRA-RED LAMP TO KEEP CHILD WARM

To the Editor:—A girl baby, aged 10 months, uncovers herself completely every night as soon as she is put to bed, no matter how cold the room. Regardless of how many times she is covered each night she immediately uncovers herself. After trial of many different kinds of models of blankets and garments it was found that the only way to keep the baby warm was to have a small infra-red lamp at a certain distance from her crib connected the whole night. Could this prolonged exposure to the infra-red rays cause any damage to the child? F. A. Bonaventura, M.D., San Diego, Calif.

ANSWER.—Infra-red rays are merely heat rays. If a therapeutic lamp is used for the purpose described, harmful effects are not to be expected as long as the lamp is kept far enough away from the surface of the child's body to prevent any concentration of intense heat on the surface of the body. Infra-red rays do not possess mysterious or unusual properties. In fact, rays from an ordinary infra-red generator which glows at a dull red heat (600 to 800 C.) do not penetrate so deeply as do the rays from an ordinary tungsten filament bulb. It has been pointed out that the "infra-red coil" used by the physician does not differ from the coil used in the familiar household heater with the exception that the household heaters have a wider reflector shaped somewhat like a soup plate which diffuses the heat through the room, whereas the physician's infra-red lamp has a more concave reflector shaped somewhat like a coffee cup which converges the radiant heat on a small area. Provided the radiation is not concentrated too intensely on one surface of the child's body, no harm should ensue. The only damage which could be done would be burning, which would be perceived instantly by the child and which would cause pain. Since the lamp is already being used without any discomfort to the child, there is no reason to expect that there will be any deleterious effects. The application described merely converts the physician's infra-red lamp into a form of household heater. With due precaution, the same procedure might be recommended in similar cases.

REACTION AFTER THYROIDECTOMY

To the Editor:—A woman aged 48, complaining of a lump in the neck of ten years' duration, a tired feeling most of the time and some difficulty in swallowing, was admitted to the hospital for study. Examination revealed a large nodular goiter in the right side of the neck, moderately advanced graying of the hair and apprehension but otherwise minimal signs of toxicity. The pulse ranged between 80 and 110, and the blood pressure was 160/80. Urine and blood studies were negative with the exception of a mild renal glycosuria, the glucose tolerance test being normal. A chest plate was negative. Basal metabolism tests were plus 45, plus 29 and plus 22 on three successive occasions during the first ten hospital days. Shortly thereafter a subtotal thyroidectomy with removal of a 5 by 4 by 4 cm. nodular area in the right lobe was performed under nitrous oxide and ether anesthesia. Iodine was not used preoperatively. When the patient returned to the ward the pulse rate was 132 and the blood pressure 157/80. By 4 p. m. her temperature was 101.4 F. (rectal). The temperature remained elevated between 100 and 102 F. for the next five days, when it fell to normal and remained there. The pulse rate continued at 130 to 140, and on the second postoperative day auricular fibrillation with an apical rate of 160 commenced. Digitalis was started, though there were no signs of failure. On the next day normal sinus rhythm returned, with a rate of 100, and the digitalis was stopped. Lugol's solution by rectum was started on the first postoperative day. The remainder of the hospital course was unremarkable. The basal metabolic rate on the twelfth postoperative day was plus 1. During the first few days after operation, physical examination of the patient was negative and no cause for the temperature elevation could be found. The patient had no complaints, and the only positive findings were as stated. Did this patient have a mild thyroid crisis or is some other explanation of this episode more likely? John R. Roberts, M.D., Auburn, N. Y.

ANSWER.—The postoperative reaction described is characteristic of that seen after a subtotal thyroidectomy for toxic goiter. Some rise in temperature postoperatively is the rule, and a rectal temperature of 102 F. for several days is about what would be expected.

The pulse rate was higher than is usually seen, but this fact can be explained by the auricular fibrillation. The onset of auricular fibrillation in the postoperative period in a woman aged 48 with a toxic goiter is not surprising. Auricular fibrillation occurring under these circumstances may be disregarded in the absence of any associated cardiac findings. If the patient is well compensated it should not be regarded seriously.

The fact that the patient felt so well after operation would rule out completely the presence of a mild thyroid crisis. In retrospect it might be said that it would have been well to give iodine preoperatively.

PELVIC MEASUREMENTS AND LABOR

To the Editor:—I should like a statement regarding the possibility of a successful delivery at full term of a patient whose pelvic measurements made by x-ray are given as true conjugate 12, transverse 12, right oblique 11, left oblique 11. The report further states that "The pelvis is rather unusual in shape. The coccyx angles posteriorly."

Ewart S. Sarvis, M.D., Sumas, Wash.

ANSWER.—The inlet measurements of this pelvis are within the range of normal and a normal sized child should have no difficulty in engaging. However, without measurements of the midplane and lower pelvis it is impossible to say what the whole picture of the bony pelvis is. From the fact that the coccyx angles posteriorly it would seem that there was room, at least in the anteroposterior diameter of the midplane. A more complete pelvimetric survey of this pelvis is desirable.

VITAMIN D AND RENAL DAMAGE

To the Editor:—A patient has frequency of urination when taking vitamin D capsules. The capsules were made by a reliable drug firm and the dose was two capsules a day. Does vitamin D produce a diuresis? Is it harmful under these circumstances?

W. J. Klinck, M.D., Lennoxville, Que.

ANSWER.—There is no evidence that vitamin D in ordinary doses (up to 1,500 units a day) causes frequency of urination or renal damage. In doses of 50,000 units or more daily vitamin D may cause renal irritation and eventually tubular degeneration. This is true particularly when the diet contains a large amount of calcium, that is when the patient takes as much as three glasses of milk a day.